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EDITORIAL



NO SANTA CLAUS?

Nearly 60 years ago the Editor of the "New York Sun" received an unusual letter. It came from a small child, Victoria O'Hanlon, and commenced:

"Dear Editor,
"I am eight years old, some of my friends say there is no Santa Claus. Please tell me the truth."

The "Answer to Virginia" as the editorial published in the "New York Sun" was called has become justly famous.

Although basically directed to a child, it contained a theme which is universal in its application.

"The most real things in the world are those that neither children nor men can see. You can tear apart a baby's rattle and see what makes the noise inside, but there is a veil covering the unseen world which not the strongest man nor even the united strength of all the strongest men that ever lived could tear apart. Only faith, fancy, poetry, love, romance can push aside that curtain and view the supernatural beauty beyond."

How then are these "most real things" co-jointed to Christmas?

Down the annals of time, man has mingled all of them with the seasonal festivities and for the want of a better name called the result, the Spirit of Christmas, the Spirit of Goodwill

among men. It has mattered little whether the conveyor of tidings has been Santa Claus, Father Christmas, Father Frost, St. Nicholas or any other, the theme has ever been the same—"Peace on Earth, Goodwill among Men." And following the lead, man in his humble way has echoed the refrain.

But what of the Radio Amateur? Perhaps he above all is especially privileged. Because his hobby knows not the bounds of physical or man-made barriers, his words, with their message reach the remotest spots of this earth. With his greeting, the Amateur conveys a sincere wish that those who hear him will delight in the Christmas and prosper in Christmases Yet To Come. With words like these echoing from the void others will feel that they are included in the occasion and share in its joys. They are being caught by the intangible bond of friendship, that most real thing in the world, that binds men into a universal whole.

To all them, both within our Institute and without, SEASON'S GREETINGS. May this festive season be all that you wish and may your future be prosperous.

To everyone everywhere—

A Merry Christmas.

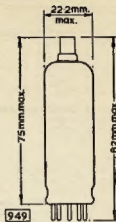
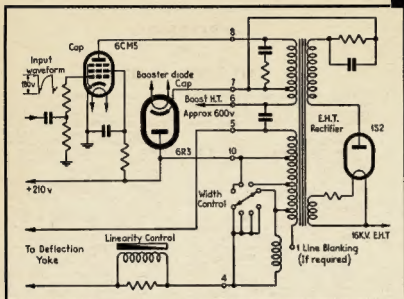
FEDERAL EXECUTIVE

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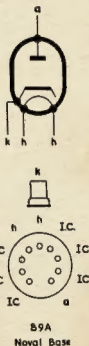
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| Anode Volts Peak | 4400V | 4400V |
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QUARTZ CRYSTAL FILTERS

Including Part Six of Modifying the AR7 Receiver

SECTION ONE

BY G. M. BOWEN,* VK5XU

IN order to align a crystal filter successfully some understanding of the basic principles involved is required, besides an enthusiasm and an abundance of patience. So for the sake of those younger Amateurs, who are usually much brighter than we are anyhow, a quick survey of the main points will be given.

It is not generally known that Pierre Curie was one of the first scientists to extensively study the "piezo-electric effect of quartz crystals. He was able to show that the mechanical stressing of a piece of ground quartz crystal produced voltages of opposite polarity at the parallel faces.

These voltages were greatest when the slice was cut parallel to any of the crystallographic axes, the X, Y and Z axes as they are called. Modern BT, GT, etc., cuts are merely combinations of these three axes designed to reduce the effects of such poor properties as variation of frequency with temperature, discontinuity of oscillation, etc.

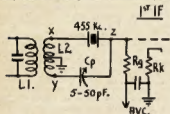


Fig. 1. L2 - Low Z winding.

Conversely, it was shown that if a voltage was applied to electrodes on the faces, distortion of the mass took place. Voltage pulses of short duration produced a damped mechanical oscillation with subsequent oscillating voltage outputs across the pulsing circuit. The frequency of these depended upon the mass of the crystal and its various dimensions and was relatively free from external circuitry.

Finally early in the century, this resonant oscillation output voltage was applied to the control of radio frequency oscillators.

In 1920, we find the first application of the "filter action" of a quartz crystal to improving the selectivity of radio frequency receivers and from that date until World War II, most of the basic circuits now in use were devised by the consulting engineers of the manufacturing firms marketing communication receivers.

The modern parallel to this type of filter is the magneto-mechanical method with its nickel-disc magnetostriction oscillating bar, incorporated in the Collins "mechanical filter." This transfers the energy from a magneto field

whereas the quartz crystal filter transfers it from an electric field.

Basically, the vibrating quartz crystal corresponds to a series resonant circuit with an exceedingly high Q, due to its high elastic property. The electrical equivalent of its mass is the inductance, L; of its elasticity, the capacitance, C; of the heat dissipated in the dielectric and friction of the molecules, the resistance R, of a typical series L.C.R. circuit.

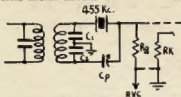


Fig. 2. C1 C2 equal.

Hence, the less the motion is damped, the higher will be the Q for a given quartz slab. For best results then, the slab should be freely suspended in a vacuum, but since the former is impossible, quartz holders, when high frequency stability is required are made so that the slab or bar is held between two screw points or suspended by thin wires. The electrodes consist of thin layers of aluminium, silver or gold, plated as evenly as possible to reduce the weight.

In general, X-cut bars, approximately 20 mils. thick $\frac{1}{8}$ inch wide and $\frac{1}{4}$ inch long are used in crystal filters of the type that this article centres around. They are included into a bridge-balance circuit which was first developed by Morrison, of the Bell Telephone Laboratories. Modifications to this type of circuit have since been made to introduce essential refinements such as variable rejection and variable selectivity.

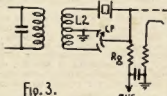


Fig. 3.

Reference to the various diagrams will disclose some of these modifications, but there are many others which provide interesting reading.

The AR7 crystal is mounted in a holder with a small air gap; the holder mounting and associated wiring naturally contributing to the value of the external capacitance (C₂). The SX28 crystal is enclosed in a specially designed polystyrene holder and the capacity

of the holder has been reduced to a minimum. The holder is wired directly into the circuit, thus further reducing the stray capacitance which lowers the efficiency of the filter.

By spluttering the electrodes onto the parallel faces of the crystal the value of the crystal capacity can be increased to a value approaching 0.05 pF. This high value enables bandwidths of 5 to 10 Kc. to be achieved with suitable circuit design. The ratio of crystal capacity (C₁) to holder capacity (C₂) determines how close the antiresonant frequency f_a can approach the series resonant frequency f_s and hence how close an interfering signal can approach 455 Kc. before it cannot be "notched" out.

Figs. 1 to 5 should be studied carefully, together with the corresponding text before embarking on the task of aligning the filter.

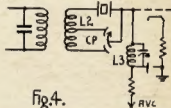


Fig. 4.

ACTION OF THE PHASING CAPACITOR, Cp

Fig. 5a shows the ideal condition for the action of a crystal filter circuit. The signal at 455 Kc. is passed and the side frequencies attenuated, but the skirt has a large flare and the attenuation of strong adjacent signals is insufficient to reduce interference. However, the curve is symmetrical and this indicates that the crystal has no holder capacity or its value is neutralised in some way.

In practice, the capacity of the holder C₂ can be as high as 20 pF. (which will include all associated wiring, etc.) and energy therefore will be passed on all frequencies as though only a 20 pF. capacitor coupling were used between the i.f.t. and the grid of the i.f. tube. The 455 Kc. signal is passed as through a short circuit (Fig. 6).

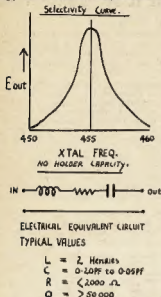
To remove the unwanted feed-through via C₂, energy is fed via C₁ as shown in Fig. 1. The secondary of the i.f.t. has a low impedance winding of a couple of hundred turns and is centred-tapped to produce antiphase voltages at X and Y with respect to ground (Fig. 1). By adjusting C₁ to the same value as C₂, the same value of voltage, but in opposite phase, will appear at Z on all frequencies.

However with the crystal resonating in series mode at 455 Kc. it will provide a short circuit path as already indicated in Fig. 5a. In effect, the

* 73 Portrush Rd., Toorak Gardens, South Aus.

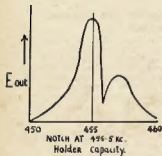
capacity of the holder has been neutralized.

Now suppose a strong signal at 455.5 Kc. is causing interference. By the adjustment of C_2 to values above or below C_1 the selectivity curve of Fig. 5b can be obtained. It is not necessary to give the mathematics of the circuitry,¹ but it can be appreciated from



SERIES RESONANT ACTS AS A SHORT-CIRCUIT TO SIGNAL AT 455 Kc.

Fig. 5a.



ANTI RESONANT FREQUENCY OCCURS AT 455.5 Kc.

PARALLEL RESONANT CIRCUIT ACTS AS A VERY HIGH IMPEDANCE AT 455.5 Kc. SERIES RESONANT [XTAL FREQ] STILL ACTS AS A SHORT CIRCUIT TO 455 Kc. SIGNAL ON 455.5 Kc. "Rejected"

Fig. 5b.

our knowledge of reactance modulators that the reflected reactance across the L.C.R. of the crystal can be either capacitive or inductive. When capacitive, the "notch" will appear higher in frequency, and when inductive the notch will be lower in frequency than 455 Kc. (See Fig. 5b.)

Hence by choosing a value for C_2 which will be variable either side of C. it is possible to attenuate the 455.5 Kc. signal to a value where its level does not cause interference.

A thorough understanding of the above is necessary to align a crystal filter successfully and in addition the following. So if you are still with me, let's proceed to the matter of selectivity.

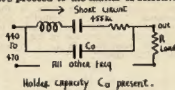
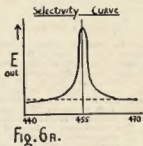


Fig. 6



SELECTIVITY

In Figs. 1 to 4 no attempt has been made to show this desirable feature. A good crystal will have a half-power bandpass of less than 250 c.p.s.

The crystal, correctly phased, is a short circuit, hence it will want to "look into" low impedance input and output circuits if the energy is to be passed. High impedance input and output circuits will load the crystal circuit as a high resistance will do to a series LC circuit.

By referring to Fig. 9a it can be seen that the loading of the crystal filter can take place either at the input or the output, to effectively broaden the selectivity curve. The secondary of the i.f.t. it made resonant at 455 Kc. will present a high impedance to the signal and hence load the crystal circuit and

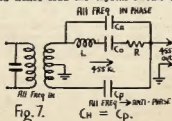


Fig. 7.

broaden the selectivity. The band-width will depend on the components in use, but can be made 5 Kc. at the half-power point. (Fig. 9b.)

This value is adequate for any phone signals, but undercoupled i.f.t.s. can achieve the same result so it is not usual to strive for greater than 2.5 Kc. in the "broad" crystal selectivity position. For greater selectivity, C. detunes the secondary from resonance, hence lowering Z and increasing the selectivity. This method is the one used in the SX series Hallicrafters receivers. C. is not continuously variable but has fixed values to give the required band-pass widths of "broad, medium and sharp."

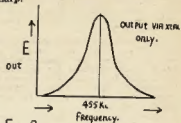


Fig. 8.

Fig. 10 shows a similar schematic to that used in the Hammarlund and the AR7 receivers. The slight dissimilarities do not affect the working of the filter as a unit but enable different patents to be held. In the AR7 there is no low turn tapped coupling to the output of the filter as shown here. The crystal couples as in Fig. 3b.

R. is a 3.5K potentiometer used as a rheostat which can be shorted out as shown. L3 and C3 provides a series resonant circuit at 455 Kc. having a high impedance which thus broadens the selectivity. As R. is brought into the circuit the Q of L3C3R. decreases and the effective impedance is lowered, the circuit eventually is detuned from 455 Kc. to a lower frequency if R. is made

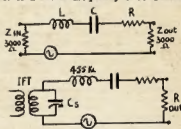


Fig. 9.

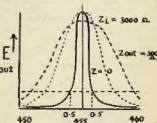
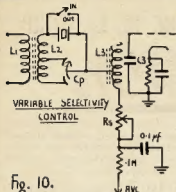


Fig. 9b.

¹ See "Radiotron Designers Handbook," p. 1050-1061.

too large. Thus the selectivity is increased to give a bandwidth of 200-300 c.p.s. where a good crystal will "ring" with a modulated signal and speech becomes unintelligible.

Hence it is necessary when aligning, to have L3C3 exactly on 455 Kc. or the output will not give a symmetrical curve.



As R_3 is adjusted to give broad or sharp selectivity the output to the grid should not show any appreciable drop in signal strength. The peak in Fig. 9c does not decrease to the same extent as the sidebands "fall up".

On the input side L_2 is a low turn centre tapped coupling coil, its impedance chosen to match the impedance of the crystal and its associated wiring. Being untuned except by the two halves of C_3 and not resonant anywhere near 455 Kc., L_2 acts merely as the secondary of a step-down transformer and has little effect on the operation. However in Fig. 1 it can be seen that C_3 is across the coil and therefore phasing adjustments will alter the input parameters. This is overcome by the use of a "differential" split-stator capacitor in the circuit of Figs. 3, 4 and 10. As C_3 is moved, the effective capacity to earth across the coil L_2 will remain constant although the phasing capacitance value will change as C_3 is turned out of mesh.

L_2 is usually tightly coupled to the primary coil L_1 , which is resonant at 455 Kc. The number of turns and the degree of coupling being correct, there should be no increase or decrease of signal strength when the crystal is "switched in" and sidebands will be reduced.

It should be well appreciated that adequate screening of input and output circuits is absolutely necessary for the best results from a filter of this nature. Any bypassing of signals from one stage to the next ruins its operation. To this end it is thus better to have the filter at the low level end of the i.f. amplifier section. Immediately following the converter is preferable and for yet another reason—to reduce the "ringing" of the crystal due to noise pulses.

In the AR7, this has been achieved by good design, while in the SX28 it follows the first i.f. stage into which is incorporated a Lamb-type of noise silencer.

² This is recognised as a constant voltage generator system.

RULES OF THE AUSTRALIAN DX CENTURY CLUB AWARD

1. The Australian DX Century Club Award is open to any Australian Amateur who has established two-way contact with one hundred or more countries in the World and complies with the following rules.
2. All contacts must have been made since the return of licenses after the 1939-45 war.
3. The official countries list as published annually (and amended from time to time) in the Federal Notes of "Amateur Radio", shall be used for the purpose of determining countries.
4. All contacts shall be made with other Amateur Stations operating in the authorised Amateur bands, or with stations licensed to contact Amateur Stations.
5. Contacts made with ship or aircraft stations will not be allowed but land mobile stations may be claimed provided the location at the time of contact is clearly shown on the confirmation.
6. In the case of countries where Amateur Stations are officially licensed by Government authorities, credit may only be claimed for stations using regular government assigned calls.
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8. Stations of a portable nature which are using their own call sign followed by the prefix of the country in which they are operating may be credited under Rules 6 and 7 above, provided that the confirmation submitted indicates the particulars of such operation and the other requirements are in accordance with these Rules.
9. Each confirmation submitted must show the date of contact, type of

emission used, the report, the band and the location of the station.

10. Confirmations must be submitted exactly as received from the station contacted and altered or forged confirmations will be grounds for disqualification.
11. Out-of-band operation used to contact a station will result in disqualification and be retrospective in the case of members.
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13. Confirmations submitted which show both phone and c.w. reports may be accepted for both sections, if the dates of each contact is shown and emission is indicated.
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16. Successful applicants will be listed monthly in "Amateur Radio". Subsequent to the first application, members must submit additional confirmations of not less than five at any one time, for additional credit.
17. Applications for membership shall be addressed to the Awards Manager, G.P.O. Box 2611W, Melbourne, and accompanied by sufficient postage for return by registered mail. Confirmations must also be accompanied by a list of claimed countries and stations, showing relevant details or explanations where necessary.

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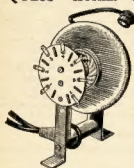
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AN AUTOMATIC MORSE KEYS

BY D. G. HAWTHORNE,* VK3ZCD

THIS article briefly describes an automatic Morse keyer and the associated equipment used as a source of practice Morse. Commercial and marine stations had been used, but these suffer the disadvantages of interference, intermittent operation, and more important, no means of speed variation to suit the trainee's skill. The recent purchase of a keyboard perforator resulted in the construction of suitable automatic transmitting equipment. The system uses the Wheatstone code, a modification of the International Morse Code designed for use in automatic equipment. It differs from Morse only in the method of presentation. Whereas standard Morse uses a variable length pulse for information, the Wheatstone code uses separate pulses signaling the beginning and completion of each character, the time in between the pulses corresponding to the length of the Morse character.

travelled a further 1/20 inch, the space hole reaches its brush, Fig. 1d, and the current flow stops the switch operation. There is then a pause of 1/20 inch tape travel till the next mark hole reaches its brush, Fig. 1e. This 1:1 mark-space ratio is the same as that for Morse "dits". Similarly, the staggered "dah" perforations result in the 3:1 mark-space ratio required for the Morse signal.

The keyboard perforator used to punch the tape, is a Teletype model obtained through disposals. It has a standard typewriter keyboard, except the punctuation marks are replaced by keys for various operating signals. The heart of the instrument is a precision punch assembly. It contains ten columns of punches, each column having a mark, sprocket, and space punch. The tape moves in a guide slit in front of the punch block, the left-hand punches are selected by "swords", metal rods

these being capable of omission or modification as required. The first section, using valve 1, is an Eccles-Jordan trigger used as an electronic switch for translation of the Wheatstone code. The second section using valves 2 and 3, is a simple, but effective, electronic key. The final section is a 800 c/s. audio oscillator. The operation of the individual units is as follows:

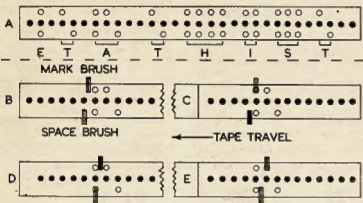


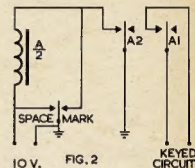
FIG. 1

In the writer's apparatus, these commencement, or mark pulses, are used to operate an electronic switch, and the completion, or space pulses, end the switch operation. The code is stored on a perforated paper tape, an example being shown in Fig. 1a. The top row of holes correspond to the mark signals, the bottom row to the space signals, and the middle row are sprocket holes. These sprocket holes are spaced 1/10 inch apart, this being equivalent to two units time, the length of a Morse "dit" being taken as one unit. It will be seen that opposed mark and space holes correspond to a "dit", staggered holes to a "dah", one sprocket hole separation between the last space hole and the next mark hole corresponds to the interletter space. A separation of two sprocket holes corresponds to the interword space.

In this equipment perforations are sensed by small spring brushes making metallic contact with the tape-guide. The space-brush is placed 1/20 inch beyond the mark-brush, Fig. 1b. When a mark hole arrives at brush, Fig. 1c, current can flow through the brush and operate the switch. When the tape has

which can move into a position between the back of the punches and a hammer. The hammer moves a short distance forward each time a letter is struck, the distance being too small to operate the punches unless a sword is in position. The keybars have projections which can depress selector bars, which, in turn, operate the swords. Imagine the key for the letter G is struck. The projections depress the selector bars corresponding to the 1st, 3rd, and 5th mark swords, and the 2nd, 4th, and 5th space swords. When the key is fully depressed, a set of contacts close, energising a solenoid which operates the hammer, causing it to force the selected punches through the tape. While the hammer is moving forward, a mechanical system determines the length of the perforated letter. On releasing the key, the hammer, swords, and punches return to their rest positions and a ratchet-wheel pulls the tape the required distance to the left. By use of a combination key, the interletter space can be omitted, enabling special characters to be formed from suitable letter combinations.

The keyer, circuit Fig. 3, can be divided into several sections, some of



(1) Eccles-Jordan trigger.¹ A relay operated translator, shown in Fig. 2, had been tried, but the response was not sufficiently rapid to operate on the momentary current pulses from the brushes. The valve circuit overcomes this because of its almost instantaneous value of the grid resistance causes V1A to preferentially reach the conducting state, the potential drop across R1 maintaining grid V1B below its cut-off potential.

The current drawn by R3 and R6 is insufficient to operate the relay A. The start signal short-circuits R6, reducing the V1B anode current to zero. The resultant rise in its anode potential applied to grid V1B via R4, allows V1A anode current to flow, this in turn actuating the relay. The lowered V1B anode potential, due to the current through R2, maintains V1A in the cut-off condition. This "switch-on" state is stabilised by the feed-back circuit; any tendency for V1A anode current to flow is countered by an increase in the V1A grid bias. The circuit can revert to its original state when the space brush short-circuits R8. If R8 is no longer short-circuited by the mark brush, the V1B anode current returns to zero, the resultant rise in V1B anode potential being transferred to the grid of V1A and allowing current to flow. At the same time the relay opens, and due to the stabilising action of the circuit, the V1B anode current remains zero till the next mark pulse causes repetition of the above sequence of events.

(2) Electronic Key. This is a modification of a circuit² due to Jack Gallagher, W5HZE. It consists of a thyatron oscillator and a double triode pulse-shaping circuit. In the rest position C3 is held charged to about 35 volts, the cathode potential of V2B, by means of grid current conduction. The bias control holds V2A in a cut-off state,

* Flat 3, 11 Leopold St., South Yarra, Vic.

and hence the relay remains open. (The trigger can be ignored for the present analysis.) On closing the dash contacts of the key S₄, C3 is rapidly discharged by the thyatron, and recharges through R19 and the speed control, R20, after the capacitor potential falls below the thyatron extinction point. The cycle can be repeated if the contacts are kept closed, the repetition rate being determined by the charging time of C3.

The fall in C3 potential causes a decrease in V2B anode current, the resultant rise in its anode potential, relayed to grid V2A by R13, allowing current flow in V2A, this actuating the relay. As C3 recharges through R19 and R20, the increased flow of V2B anode current, and corresponding fall in V2A grid potential will cause cut-off of V2A and opening of the relay. The critical V2B potential for V2A cut-off is set by the value of R10, this setting determining the mark-space ratio for the dash.

On closing the dot contacts, the potential drop across R16 causes the thyatron to extinguish before C3 is fully discharged. This results in a faster repetition rate without alteration in the space duration. The latter is determined by the constant interval required for C3 to charge from the critical potential defined earlier, to the firing potential of the thyatron. This is fixed by the values of R19 and R20, and is independent of previous events, provided the discharged potential is less than the critical potential. The dot-dash ratio is set by R16, which could be replaced with a 2.2K resistor without noticeable deterioration in quality. Note—Dirty key contacts will cause erratic operation by introduction of additional resistance in the discharge circuit.

The electronic key has a self-completing characteristic, i.e. the contacts need only be closed for the fraction of a second required to discharge C3. If the trigger is not required, the circuit can be broken at the R5/relay junction. The speed range of the key is approximately 12 to 35 words per minute. The only precaution is to maintain the thyatron heater voltage above the manufacturer's minimum of 5.8 volts. The speed is dependent on the cathode temperature, and if the voltage falls below the minimum, the keying becomes erratic.

(3) Audio Oscillator. This a resistance-capacitance oscillator tuned to 800 c/s. It is keyed by interruption of the a.c. return path of R26 and R27. L is an audio choke used for simultaneous keying of other equipment; it was not installed in the writer's unit. The audio frequency can be changed to 1000 c/s. by replacing R25, R26 and R27 with 47K resistors. The audio output is monitored by high impedance phones placed across R29.

(4) Power supplies. A supply of 300 volts at 20 mA. is required for the high tension line. It is advisable to not differ more than 10 per cent. from this value, this being the tolerance of supplies and components allowed for in the design. The electronic key supply is not critical, the only noticeable effect for voltages as low as 230 volts being a decrease in speed and a need for re-adjustment of R10. The heater requirements are 6.3 volts at 2.1 amps. Care must be taken to avoid excessive resistance losses in the heater leads.

(5) Hand-key mechanism. This is designated as S₄ in the circuit. It can be a modified bug key as described by W5HZB. The writer's key consists of two Army keys, WT No. 2, mounted

back-to-back on a piece of Meccano. The knobs have been replaced by bakelite paddles, the spacing being ca. $\frac{1}{4}$ ". The key arms are not connected mechanically. The left-side key is used for "dits" in accordance with standard bug design.

(6) Keying Head. This is unique. The writer's model is powered by a small synchronous motor, the speed variation being obtained by a variable ratio friction drive attached to a 1:50 worm drive from a disposals tuning unit (BC191E). Use of a $\frac{1}{4}$ inch diameter capstan gives a tape speed of between 35 and 75 inches per minute, i.e., 14 to 30 words per minute. The brushes are made from four strands of 26 gauge phosphor-bronze wire attached to bolts used for setting the position. Further information is available on request, the complete description being too detailed to warrant inclusion in this article.

The only serious trouble experienced in the design was the construction of the brushes; these are operating properly at present, though the writer's skill at metal-work is not sufficient to make the brushes reliable enough for communications purposes. No difficulty was found in the adjustment of the head, and the quality of the Morse is perfect.

Commercial equipment normally uses vibrating "peckers", synchronised with the tape drive, to sense the holes in the tape. Though more complicated than the brush system used by the writer, it overcomes the serious problems of timing ambiguities and reliance on good brush contact.

REFERENCES

1. Renwick, W. and Philster, M., "A Design Method for Direct-Coupled Flip-Flops," Electronic Engng. 27, 546.
2. Gallagher, J. D., "A Thyatron-Controlled Electronic Key," "QST" 37, No. 12, p.34.

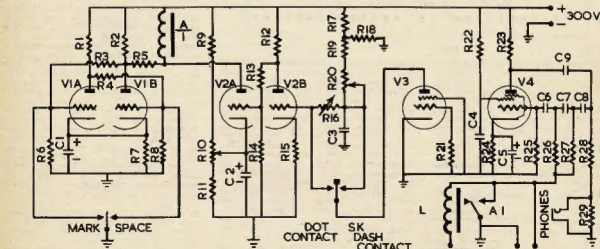


FIG. 3

C1, C3—5 pF., 350v.v.
C2—0.5 pF., oil/paper.
C4—0.1 pF., 400v.
C5, C6—20 pF., 400v.
C7, C8—2,000 pF., mica.
C9—0.01 pF., 500v.
R1, R2—47K, 1w.
R3, R4, R12—500K, 1/2w.
R5, R13, R14, R16—22K—1M, 1/2w.
R6, R15—100K, 1/2w.
R7—15K, 1/2w.

R8—52K, 1/2w.
R9—55K, 20w., wire-wound.
R10—5K, 4w., wire-wound.
R11—1.5K, 1/2w.
R16—5K, carbon.
R17—220K, 1/2w.
R18—330K, 1/2w.
R20—Carbon, linear taper.
R21—30K, 1/2w.
R23—470K, 1/2w.

R24—52K, 1/2w.
R25, R26, R27—50K, 1/2w.
R28—47K, 1/2w.
R29—52K, 1/2w.
L—Audio choke.
Relay—From BC387, 1 mA., 10K coil resistance.
V1, V2—6SN7GT.
V3—6X4.
V4—6SJ6.
Sk—See text.

HINTS AND KINKS

DISMANTLING A MAST

The mast to be dismantled was constructed of 2" square oregon, planed all round, and stood approximately 40



Saw timber diagonally, length one foot.
Two pieces 3 inch angle steel.



Four 5/16 inch bolts 2 1/2 inches long.
(Two through each way.)



Usual joint.
(About 3 feet long.)
Three 3/8 inch bolts 6 inches long.

Cut each side different length. (About 1 ft. difference quite satisfactory.)

Five 5/16 inch bolts 8 inches long.

Paint all joints before re-assembly.
Suggested the bolts be coated with aluminum paint to avoid rusting.

feet high; utilising three pieces of timber slightly in excess of 20 feet, in the conventional manner.

Because it was not practicable to remove the 20 ft. (or thereabouts) lengths, the timber had to be cut to about 10 feet lengths.

The top length was cut diagonally, with a cut about a foot in length, and was later reconstructed with the aid of two pieces of 2" angle steel and four 5/16" bolts, as sketched.

The lower section was cut so that each side was left with an overlap of one foot and a three foot piece of the same sized timber bolted in the middle, when re-assembled, using five 5/16" bolts at the points indicated.

The length of the mast is not affected by the cutting and it has stood for three years after re-assembly, indicating that the method is satisfactory.

It has again been dismantled and will be re-erected on the same lines, using a ladder as a "jury rig" to swing it up on its bolt-mounted base, in due course.

No additional guys are needed, six having been found sufficient to hold a 137 feet wire against all winds.

It is, of course, necessary to paint the cut points before re-assembly and also to paint the angle steel, both inside and out.

—T. Laidler, VK3TL.

INSULATED FEED-THROUGH

If you are wiring any equipment and you desire rigidity and insulation through the chassis, simply obtain the plastic tube portion of a used ball-point pen refill. Drill a hole through the chassis and the job is neatly done! If necessary the tube can be cemented neatly into place with polystyrene which has been dissolved in ethylene dichloride.

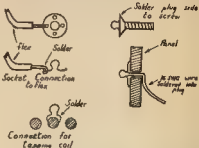
—Ian Hunt, W1A-13007.

CONNECTORS

Connections are required for a variety of uses in radio equipment and especially in Amateur Radio gear. Such uses are the connecting of aerials and coupling links, speakers and phones, the tapping of tuning coils, etc.

To perform these functions screw terminals, banana plugs, telephone jacks, alligator clips and water switches have been used.

A neat and cheap substitute for most of these items is found in the snap fastener or press stud used for women's and children's clothing. These, which sell for threepence a dozen, are made of plated brass and form a miniature spring-retained plug and socket.



The plug part may be fitted to a screw for panel mounting by soldering the head of a 1/4" Whitworth counter-sunk brass screw to the back of the plug. The socket section can be connected to a flexible wire through the one thread hole of the four which is not adjacent to the spring and turning back and soldering.

Also the plug part may be fitted to a panel by soldering a solid wire into the hollow of the plug, passing the wire through a neat hole in the panel and bending down sharply behind.

For tapping an inductance the base of the plug portion may be folded around the wire and soldered to it. In this way the connectors may replace a wafer switch and reduce the distributed capacity of an inductance.

—J. Gazard, VK9G.

USING FILM REELS AS CAPACITIVE HATS

Have you ever tried using a 16 mm. movie film reel as the capacitive hat for a mobile whip? These reels are readily modified for simple mounting, and perform effectively as capacitive loading units. You may even be lucky enough to obtain one or more slightly damaged reels at no cost by visiting a film library or concern that rents home entertainment films.

In the original form, a reel consists of two round discs joined at the centres by the hub on which the film is wound. Only one of the discs is used for capacitive loading purposes and, as a result, the reel should be split into two sections by removing the hub. Enlarge the hole at the centre of one of the discs to accommodate a bushing or other suitable hardware, slip the assembly down over the top section of the whip, and you are in business.

This idea was actually suggested by W5YLZ. It has worked out so well in practice that I thought it worth passing along.

—V. Blatye-Jar, W5TWW, "QST" Feb. '52.
[Editor's Note: See "Top Loading Capacitance" in the Radio Amateur's Handbook, chapter 19, for additional data on capacitive hats and the effects of capacitive loading on loading coil inductance.]



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for general communication frequencies in the range 3-14 Mc. Higher frequencies can be supplied.

THE FOLLOWING FISHING-CRAFT FREQUENCIES ARE AVAILABLE IN FT243 HOLDERS, 6280, 4095, 4535, 2760, 2524.

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ALSO AMATEUR TYPE CRYSTALS—3.5 AND 7 Mc. BAND.

Commercial—0.02% 23/12/6, 0.01% 23/15/6, plus 12 1/2% Sales Tax.

Amateur—from 23 each, plus 12 1/2% Sales Tax.

Regrinds 21/10/-.

CRYSTALS FOR TAXI AND BUSH FIRE SETS ALSO AVAILABLE.

We would be happy to advise and quote you as to the most suitable crystal for your particular application, either in the pressure or vacuum type holder.

New Zealand Representatives: Messrs. Carrel & Carrel, Box 2162, Auckland.

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Phone: UM 3387



ORYX

(LOW VOLTAGE)

MINIATURE SOLDERING INSTRUMENT

*A must
for
Transistors*

(actual size)

PROTECT YOUR TRANSISTORS WITH ORYX

There is a danger of damage when soldering to transistor leads, due to A.C. leakage currents. The use of a low-voltage transformer supply, with earthed secondary is therefore recommended. Take care also that too much heat is not applied to flying leads. The ORYX iron, and a heat-sink such as heavy pliers gripping the lead between the contact point and the transistor, will ensure protection.

- Fast heating element, ready for operation in less than one minute.
- Exclusive design features resulting in universal acceptance of ORYX as the standard miniature soldering instrument.
- The ORYX long life element will outlast several bits which are of tight push-on fit.

| Bit Dia. | Volts | Watts | Nett Weight | Length | Recommended Use |
|--------------------------------|------------------|-------|-------------|--------|---|
| Model 6 1/16" (Fixed) | 6 | 6 | 0.25 oz. | 6" | Electrical measuring instrument fine assemblies, hairsprings, R.F. pick-up and speech coils, hearing aid sub-assemblies, etc. |
| Model 6a 3/32" (Push-on) | 6 | 6 | 0.25 oz. | 6" | As for Model 6 (for extremely delicate work only). |
| Model 9 5/32" (Push-on) | 6, 12, 24-27½ | 8.3 | 0.25 oz. | 6" | Hearing Aids, Radio and TV Sub-assemblies, Coils, Electronic Instruments, Model Construction, Electro-Medical, etc. |
| Model 12 3/16" (Push-on) | 6, 12, 24-27½ | 12 | 0.5 oz. | 6.25" | Radio, Television, and Telecommunications assemblies. |
| Model 18 3/16" (Push-on) | 6 | 18 | 0.75 oz. | 7½" | For heavier work, heat capacity equivalent to that of most 80 watt soldering irons. |

MANUFACTURERS SPECIAL PRODUCTS PTY. LTD.

47 YORK STREET, SYDNEY

MELBOURNE: Amalgamated Wireless (Australasia) Ltd. ADELAIDE: Newton McLaren Ltd.
PERTH: Nicholson's Ltd., Carlisle & Co. Ltd. HOBART: Noyes Bros. Ltd. BRISBANE: Chandlers Ltd.

MSP3/58

AWARDS

D.V.Q. AWARD

For those interested in awards, here is a new award given by the Radio Club of Quebec. It is called the D.V.Q., French abbreviation for Diplôme de la Ville de Québec, Quebec City Diploma.

To be eligible, each applicant must give proof of having contacted at least five different stations in the City of Quebec; for other countries than Canada and U.S.A., a total of three stations is necessary. C.w. or Phone, or a combination of C.w. and Phone makes no difference in obtaining this award.

Just send your log abstract and one Reply Coupon to: Alex Desmeules, VE2AFC, 188 Aberdeen Street, Quebec City, Canada.

J.A.R.L. AWARDS

J.A.R.L. is issuing the following certificates for confirmed two-way contacts and short wave listeners. Those who can satisfy each of the following items will be awarded a certificate.

QSLs dated after 30th July, 1952, the date when Japanese Hams came back on the air after World War II, are available. All authorised bands and all types of emission may be used.

Send your QSLs to the Oversea Committee, J.A.R.L., P.O. Box 377, Tokyo, Japan, with a check list. Shortly after, you will have a fine certificate for the result of your efforts.

(1) A.J.D. (All Japan Districts) will be awarded to any Ham who can prove contact with a station in each of 10 J.A. call areas. The application must be accompanied by 10 I.R.C.'s for non-members and 5 for members of J.A.R.L.

(2) H.A.C. (Heard All Continents) will be awarded to any SWL who can submit a Ham Station's QSL card for

six continents of the world. 5 I.R.C.'s for non-members and no fee for members of J.A.R.L.

(3) W.A.J.A. (Worked All Japan Prefectures) will be awarded to any Ham who can prove contact with the 46 separate prefectures in Japan. 10 I.R.C.'s must be included in the application for non-members and no fee for members of J.A.R.L.

(4) J.C.C. (Japan Century Cities) will be awarded to any Ham who can prove contact with a station in 100 different cities in Japan. There are over 400 cities in Japan. 10 I.R.C.'s must be paid for non-members and no fee for members of J.A.R.L.

(5) Certificates for S.W.L.s. These certificates also apply to SWL's who can prove having heard the stations mentioned above. Other conditions are the same as for transmitting stations.

TWENTY-FIRST I.R.C. CONTEST Better Response from Australasia

The coming of age of the B.E.R.U. Contest was celebrated by Amateurs throughout the Commonwealth on January 25-26, 1953, in no uncertain manner. More came on the air, made more contacts and sent in more logs than last year which was considered to be among the most successful of all previous contests. There was a rise of 25 per cent. in the number of logs received.

In the High Power Section the first three placings were: ZS6DL, 1st, 4669 points; ZC4IP, 2nd, 4145 pts.; VE3KE, 3rd, 3977 pts. Australasian entries: VK2GW, 13th, 2475 pts.; ZL4BL, 1500 pts.; VK2APK, 1145 pts.; VK5MY, 1120 pts.; VK2PV, 1055 pts.; VK3BA, 1005 pts.; ZL1BJ, 998 pts.; ZL1RD, 890 pts.; VK2AYA, 785 pts.; VK9FJ, 620 pts.; VK4XW, 210 pts.; and VK2HZ, 150 pts.

The Low Power Section was won by ZS6R with 2538 pts.; ZD2DCP, 2nd, 1994 pts.; ZB2I, 3rd, 1946 pts. Australasian entries: VK3ZC, 920 pts.; and ZL1MT, 775 pts.

CAPACITIVE NEUTRALISING HINT

The capacitive neutralising circuit for screen-grid tubes shown in Fig. 1 will be recognised as the basic arrangement described in Chapter 6 of "The Radio Amateur's Handbook" (see "Stabilising Amplifiers"). It differs from the Handbook system only in that the grid bypass, C1, is the variable control, while the neutralising capacitor, C2, has a fixed value.

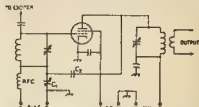


Fig. 1.—Circuit of a screen-grid amplifier using the capacitive neutralising arrangement suggested by WILU. Notice that a variable capacitor, C1, is used as the grid-circuit by-pass and that the neutralising capacitance is of fixed value. Neutralising is accomplished by the adjustment of C1.

In practice, C2 usually has a very low value of capacitance—approximately 2 to 10 pF. Voltage rating for the capacitor must be the same as the amplifier plate voltage for c.w. work and twice this value when plate modulation is used. A variable capacitor that will meet these specifications is not always easily come by. However, a suitable fixed unit can usually be easily located or quickly fabricated from scrap aluminium. Of course, the fixed capacitor may be used as long as the grid by-pass capacitor, C1, is variable. Fortunately, compact wide-range padder capacitors that have adequate voltage rating for grid-circuit duty are available. The voltage rating required must equal the operating bias of the amplifier tube. The knowing Ham will select a conservative rating that allows some safety factor.

—W. E. Allen, WILU ("QST," Mar. '53)

D.X.C.C. LISTING

Listed below are the highest twelve members in each section. New members and those whose totals have been amended will also be shown.

PHONE

| Call | Cer. Cnt- No. rises | Call | Cer. Cnt- No. rises |
|--------|------------------------|-------|------------------------|
| VK2RU | 2 211 | VK3BZ | 3 176 |
| VE3WFL | 14 211 | VK6KW | 4 156 |
| VK6MK | 43 206 | VK4RW | 23 164 |
| VK3ATN | 20 204 | VK3KE | 10 163 |
| VK6FJ | 21 203 | VK6DB | 31 161 |
| VK4HR | 12 193 | VK4WF | 16 160 |

C.W.

| Call | Cer. Cnt- No. rises | Call | Cer. Cnt- No. rises |
|-------|------------------------|-------|------------------------|
| VK3KB | 10 245 | VK3BU | 48 213 |
| VK3CK | 36 238 | VK3YL | 39 202 |
| VK4FJ | 28 234 | VK3BY | 40 202 |
| VK3FH | 18 226 | VK6RU | 18 185 |
| VK3BZ | 6 222 | VE3RO | 2 181 |
| VK4HR | 8 218 | VK3KE | 23 176 |

| Call | Cer. Cnt- No. rises | Call | Cer. Cnt- No. rises |
|-------|------------------------|-------|------------------------|
| VK4RW | 47 155 | VK3JT | 54 134 |

OPEN

| Call | Cer. Cnt- No. rises | Call | Cer. Cnt- No. rises |
|--------|------------------------|--------|------------------------|
| VK3ACK | 9 269 | VK3XU | 81 221 |
| VK4FJ | 32 238 | VK3IG | 3 215 |
| VK6RU | 8 236 | VK6MK | 74 213 |
| VK4HR | 7 233 | VK3E | 12 210 |
| VK3BZ | 4 231 | VK3ATN | 68 210 |
| VK3WL | 46 226 | VK3LZ | 23 201 |

| Call | Cer. Cnt- No. rises | Call | Cer. Cnt- No. rises |
|-------|------------------------|-------|------------------------|
| VK4RW | 52 191 | VK3JT | 63 140 |

AMATEUR RADIO SERVICE

605 ABERCORN STREET, ALBURY, N.S.W. Phone 1695

would like to take this opportunity to wish you all a

Very Merry Christmas

and a

Happy New Year

with good DX prospects.

We also thank you for your interest, and look forward to being of some assistance to you during the New Year.

(Signed) D. C. Haberecht, for A.R.S.

1958 REMEMBRANCE DAY CONTEST RESULTS

WESTERN AUSTRALIA RETAIN TROPHY

Congratulations to the Western Australian Division for the third time in succession with a narrow win from the Tasmanian Division.

The Memorial Trophy will again be held by Western Australia. A framed photograph of the Trophy will also be presented.

To Tasmania, the Contest Committee has made an award of a suitably inscribed Certificate for the Highest Average Log Score. Victoria also put up an excellent performance.

South Australia made history by having an average score of over the 1,000 points for the top six logs.

It was pleasing to see that New South Wales improved the log entry from 56 logs in 1957 to 90 logs in this present Contest. Even so, it is still very difficult for the larger Divisions to gather over 1,000 licensees together. In these States the percentage of "inactive" calls is as much as 25% and further thought should be given to equalising the conditions.

A pleasing aspect of the Contest was the increased entry in the "Listeners' Section. Extra awards have been made.

—Federal Contest Committee.

STATE TROPHY

Western Australian 5404 points

STATE AWARD—Highest Log Average

Tasmania 281.7 points

CALL AREA AWARDS

| Phone: | Points |
|-----------------------|--------|
| VK1PM—R. E. W. May | 970 |
| 3ATN—T. R. Naughton | 1271 |
| 3ATR—T. B. Rodda | 984 |
| 3ADW—D. A. Wardlaw | 933 |
| 4DJ—G. F. Pooley | 774 |
| 5EN—A. R. E. Nitschke | 1109 |
| 5AF—A. S. Little | 1003 |
| 6KW—R. W. Hugo | 914 |
| 7CC—G. Cranby | 702 |
| 8LE—K. Eap | 314 |
| OTC—T. J. Cordwell | 672 |

| Open: | Points |
|------------------|--------|
| VK2QL—F. T. Hine | 498 |
| 3XB—I. Stafford | 409 |
| 4JF—F. C. Files | 219 |
| 5QR—R. V. Galle | 390 |
| 6UF—F. H. Turner | 149 |
| 7CL—C. Harrison | 148 |
| 9RR—R. R. Hooper | 84 |

| C.w.: | Points |
|-----------------------|--------|
| VK2RS—D. C. Haberecht | 1077 |
| 2BO—E. L. Andrews | 941 |
| 3ALZ—L. F. Berwick | 849 |
| 4DP—D. M. Portley | 834 |
| 5WO—A. S. Condon | 1144 |
| 5NO—L. H. Vale | 1080 |
| 6RU—J. E. Rumble | 1174 |
| 7KA—K. E. Millen | 714 |
| 9XK—S. R. Coleston | 848 |

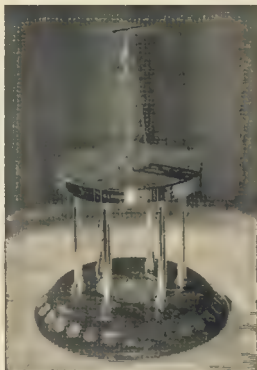
| Listeners: | Points |
|----------------------|--------|
| VK2—D. M. Grantley | 1054 |
| J. McAllister | 778 |
| VK3—A. C. Stebbing | 815 |
| C. T. Taylor | 783 |
| VK4—Nil | |
| VK5—F. W. Aslin | 706 |
| VK6—A. W. Clowes | 983 |
| VK7—R. A. de Balfour | 1131 |
| VK9—Nil | |

NEW SOUTH WALES

| | | | |
|------------|------|--------------|-------|
| VK2RS Open | 1077 | Total Score | 18841 |
| 1PM Phone | 970 | Average/6 | 925.5 |
| 2BO Open | 941 | Licensees | 1207 |
| 2AHH Phone | 891 | Log Entry | 90 |
| 2AHH Phone | 856 | Percentage | 7.48 |
| 2TU Phone | 818 | State Points | 2330 |

State Log Average 209.3

| Phone: | | | |
|--------|-----|-------|-----|
| VKEYN | 617 | VK2ER | 162 |
| 3VY | 431 | 2AJ5 | 558 |
| 2A1A | 419 | 2NV | 146 |
| 2AQF | 398 | 2ADT | 142 |
| 2AWN | 315 | 2ADL | 142 |
| 3G1 | 313 | 3B3 | 133 |
| 2ACD | 288 | 3GV | 131 |
| 2AWX | 329 | 3A1L | 138 |
| 3OH | 397 | 3W | 108 |
| 2AED | 254 | 2AOF | 108 |
| 3RI | 244 | 2ALU | 88 |
| 3W | 241 | 2PM | 81 |
| 3YU | 230 | 2KT | 80 |
| 2A1M | 209 | 2AAJ | 77 |
| 2JAF | 207 | 2XP | 63 |
| 2JA | 188 | 2AJO | 89 |
| 2SR | 177 | 2ATS | 64 |
| 2BB | 170 | 2DR | 62 |
| | | 2WI | 48 |
| | | 2VJ | 48 |
| | | 2ABO | 40 |
| | | 2AVI | 36 |
| | | 2APJ | 33 |
| | | 2APQ | 31 |
| | | 2AOR | 25 |
| | | 2AJY | 23 |
| | | 2AOQ | 23 |
| | | 3FL | 23 |
| | | 3MP | 22 |
| | | 3VT | 21 |
| | | 3ACO | 19 |
| | | 3HK | 16 |
| | | 3HM | 13 |
| | | 3AGR | 11 |
| | | 3AXG | 8 |
| | | 3CB | 8 |



Remembrance Day Trophy retained by West. Australia

| Open: | | | |
|-------|-----|--------|-----|
| VK1AZ | 783 | VK1AJQ | 338 |
| 3PN | 893 | 2ACH | 159 |
| 2XU | 842 | 2AGH | 138 |
| 2VN | 443 | 2EG | 131 |
| | | 2OE | 131 |
| | | 2ANU | 103 |
| C.w.: | | | |
| VK2QL | 498 | VK2OW | 149 |
| 2YB | 205 | 2HO | 105 |
| 2XQ | 183 | 2HW | 53 |
| 2EL | 147 | 2IC | 47 |
| | | 2EC | 44 |
| | | 3RJ | 46 |
| | | 2ATG | 45 |
| | | 2FM | 37 |
| | | 2SG | 10 |
| | | 3VA | 30 |
| | | 2AKZ | 17 |

VICTORIA

| | | | |
|--------------|------|--------------|-------|
| VK3ATN Phon. | 1271 | Total Score | 18499 |
| 3ATR Phone | 984 | Average/6 | 951 |
| 3ADW Phone | 933 | Licensees | 1149 |
| 3DQ Phone | 899 | Log Entry | 72 |
| 3ALZ Open | 843 | Percentage | 6.27 |
| 3OM Phone | 800 | State Points | 2110 |

State Log Average 256.9

| Phone: | | | |
|--------|-----|--------|-----|
| VK3AIT | 723 | VK3AKF | 213 |
| 3VF | 696 | 3AJF | 205 |
| 3TC | 686 | 3AGG | 201 |
| 3ART | 485 | 3BC | 186 |
| 3W | 447 | 3SM | 186 |
| 3APJ | 440 | 3ATN | 183 |
| 3ACN | 438 | 3HE | 184 |
| 3ASB | 412 | 3RN | 164 |
| 3APS | 412 | 3EZ | 163 |
| 3KC | 381 | 3AGV | 147 |
| 3NN | 338 | 3AZS | 132 |
| 3ARJ | 338 | 3AXU | 130 |
| 3ATP | 300 | 3PK | 119 |
| 3TG | 299 | 3AUL | 118 |
| 3ZU | 280 | 3DY | 110 |
| 3YV | 234 | 3CE | 100 |
| 3ADV | 216 | 3PZ | 13 |

VK3JE 130 VK3FR 104 VK3OH 88

| C.w.: | | | |
|-------|-----|-------|-----|
| VK3XB | 253 | VK3ZA | 238 |
| 318 | 241 | 3AEV | 237 |
| 3HG | 278 | 3NK | 123 |
| 3BJ | 238 | 3AWS | 91 |
| | | 3YS | 91 |
| | | 3KJ | 74 |
| | | 3GZ | 63 |

QUEENSLAND

| | |
|-------------|-----|
| VK4DJ Phone | 774 |
| 4DP Open | 584 |
| 4PQ Phone | 584 |
| 4RH Open | 533 |
| 4MF Phone | 458 |
| 4AF Phone | 327 |

| | |
|--------------|-------|
| Total Score | 7299 |
| Average/6 | 548.3 |
| Licensees | 401 |
| Log Entry | 47 |
| Percentage | 11.72 |
| State Points | 1404 |

State Log Average 155.3

| Phone: | | | |
|--------|-----|-------|----|
| VK4HA | 266 | VK4ER | 47 |
| 4BB | 257 | 4LR | 41 |
| 4TF | 250 | 4FF | 40 |
| 4WJ | 248 | 4JF | 39 |
| 4BN | 246 | 4CN | 38 |
| 4DI | 218 | 4NG | 31 |
| 4PU | 209 | 4RW | 29 |
| 4PK | 183 | 4XR | 26 |
| 4BJ | 143 | 4ZZ | 26 |
| 4PJ | 133 | 4EC | 30 |
| 4PW | 118 | 4MO | 19 |
| 4OV | 81 | 4NJ | 19 |
| 4CJ | 81 | 4EZ/P | 13 |
| 4ZP | 76 | 4AQ | 13 |
| 4ZF | 75 | 4BA | 13 |
| 4PX | 73 | 4PD | 8 |
| 4XO | 61 | 4BJ | 5 |
| 4CM | 59 | | |

VK4DO 283 VK4XP 88

181 83

C.w.:

VK4JF 219 VK4CJ 81

4AW 40

SOUTH AUSTRALIA

| | | | |
|------------|------|--------------|--------|
| VK5WO Open | 1144 | Total Score | 18787 |
| 5EN Phone | 1109 | Average/6 | 1004.5 |
| 5NO Open | 1090 | Licensees | 435 |
| 5AF Phone | 1003 | Log Entry | 76 |
| 5KM Phone | 879 | Percentage | 17.48 |
| 5JN Open | 802 | State Points | 4283 |

State Log Average 246.9

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| Open: | | | | |
|--------|-----|-------|-----|-------|
| VK5FY | 285 | VK5WC | 213 | VK5LD |
| SRG | 281 | | | SPK |
| C.w.i. | | | | |
| VK3QR | 290 | VK3MZ | 110 | VK3TL |
| 5XK | 228 | 5RK | 74 | 5OR |
| 5MY | 294 | 5TW | 89 | 5MD |
| 5JT | 221 | 5RX | 83 | 5DK |
| 5TG | 213 | | | 5EM |

| | | | |
|-------------------|------|--------------|-------|
| YK8RU Open | 1174 | Total Score | 12530 |
| 6KW Phone | 914 | Average/6 | 795.7 |
| 6WD Phone | 734 | Licenses | 242 |
| 6CL Phone | 688 | Log Entry | 89 |
| 6DX Phone | 647 | Percentage | 38.78 |
| 6BE Open | 617 | State Points | 5404 |
| State Log Average | | | 149.8 |

| Unacceptable Log: VK2ZAA, 24 pts. | | | |
|-----------------------------------|-----|--------------|-------|
| TASMANIA | | | |
| VK7KA Open | 714 | Total Score | 12040 |
| 7GC Phone | 702 | Average/8 | 688 |
| 7RN Phone | 697 | Licenses | 125 |
| 7DW Phone | 657 | Log Entry | 46 |
| 7JB Open | 629 | Percentage | 36.8 |
| 7AI Phone | 609 | State Points | 5099 |
| State Log Average | | | 261.7 |

| | | | |
|-------------------|-----|--------------|-------|
| VK7KA Open | 714 | Total Score | 12040 |
| 7GC Phone | 702 | Average/8 | 868 |
| 7RN Phone | 697 | Licenses | 125 |
| 7DW Phone | 657 | Log Entry | 46 |
| 7JB Open | 629 | Percentage | 36.8 |
| 7AI Phone | 609 | State Points | 5099 |
| State Log Average | | | 261.7 |

Amateur Radio, December, 1950

| | | | | |
|-------|-------|-----|--------------|------|
| VK9XK | Open | 848 | Total Score | 2268 |
| 8DB | Open | 712 | Average/6 | 378 |
| 9LE* | Phone | 314 | Licenses | 77 |
| 9NT | Open | 293 | Log Entry | .. 6 |
| 9RR | C.w. | 84 | State Points | 555 |
| 9HI | Phone | 17 | | |

* Cores Island.

ANTARCTICA
VKOTC Phone 672

LISTENERS SECTION

| | | | |
|----------------------|------|---------------------|-----|
| D. M. Grandey . . . | 1054 | J. E. Mackie . . . | 423 |
| J. McAllister . . . | 778 | D. W. Shephard . . | 374 |
| L. S. Curthoys . . . | 717 | B. J. Harwood . . . | 370 |
| N. L. Dash . . . | 874 | P. J. Carter . . . | 338 |
| J. Douglas . . . | 840 | B. J. Smyth . . . | 380 |
| H. C. Craig . . . | 818 | D. Richardson . . . | 40 |
| B. F. Cartwright . . | 838 | | |

| | | | |
|----------------|-----|------------------|-----|
| A. C. Stebbing | 815 | E. W. Treblecock | 370 |
| C. T. Taylor | 793 | I. D. Thomas | 277 |
| J. M. Hilliard | 835 | H. Louitt | 228 |
| F. Milne | 839 | G. R. Morris | 189 |
| P. R. Woodman | 808 | D. H. Jenkin | 190 |
| L. A. Barclay | 844 | M. A. Cadzow | 187 |

| | | | |
|----------------|-----|----------------|-----|
| Y. W. Aslin | 764 | W. J. Clayson | 443 |
| G. H. Herden | 886 | Miss J. Martin | 308 |
| R. J. Simmonds | 643 | D. Brashear | 38 |

A. W. Clowes .. 903 Disqualified Log:
C. J. Anderson .. 902 F. H. Prior.

| | | | |
|------------------|------|------------------|-----|
| R. A. de Balfour | 1131 | C. Russell-Green | 480 |
| R. K. Emmett | 615 | | |

The draft rules of this Contest having been ratified by Divisions, the rules will be as published in the September issue (p. 16) of "A.R."

It is hoped that the amended rules will entice more participants in this event. There are sections for h.f. and v.h.f. this time.

Remember the date: **Sunday, 25th January, 1959.** Have your portable equipment ready to enter this Contest.

VJLF HANDBOOK
By Ott and Johnston

This publication by Radio Publications, Wilton, Connecticut, U.S.A., and edited by two known W6 v.h.f. men, is a must for the serious Australian v.h.f. enthusiast.

It contains approximately 200 pages, liberally illustrated by photographs and drawings of v.h.f. equipment. There are twelve chapters, covering all aspects of v.h.f. technique.

With very few exceptions, the equipment described can be constructed from components available in Australia.

Australian price is 34/3, 1/9 postage.
Our copy from Technical Book and
Magazine Co., 295-299 Swanston St.,
Melbourne.

No. **E. AUSTRALIA — W. EUROPE S.M.** No.

| 0 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 |
|-----|---|---|---|---|----|----|----|----|----|----|----|----|
| GMT | | | | | | | | | | | | |
| 00 | | | | | | | | | | | | 45 |
| 20 | | | | | | | | | | | | 25 |
| 21 | | | | | | | | | | | | 21 |
| 24 | | | | | | | | | | | | 14 |
| W | | | | | | | | | | | | 4 |

[illegible][illegible][illegible]

0 2 4 6 8 10 12 14 16 18 20 22 24

46 46
20 20
21 21
16 16
7 7

the corresponding cell for the left side corresponds to the right side

the corresponding cell for the left side corresponds to the right side

| Age (years) | Control (n=40) | Mild (n=21) | Moderate (n=21) | Severe (n=14) |
|-------------|----------------|-------------|-----------------|---------------|
| 0 | 1 | 1 | 1 | 1 |
| 2 | 1 | 1 | 1 | 1 |
| 4 | 1 | 1 | 1 | 1 |
| 6 | 1 | 1 | 1 | 1 |
| 8 | 1 | 1 | 1 | 1 |
| 10 | 1 | 1 | 1 | 1 |
| 12 | 1 | 1 | 1 | 0 |
| 14 | 1 | 1 | 1 | 0 |
| 16 | 1 | 0 | 1 | 0 |
| 18 | 1 | 0 | 0 | 0 |
| 20 | 1 | 0 | 0 | 0 |
| 22 | 1 | 0 | 0 | 0 |
| 24 | 1 | 0 | 0 | 0 |
| 26 | 1 | 0 | 0 | 0 |
| 28 | 1 | 0 | 0 | 0 |
| 30 | 1 | 0 | 0 | 0 |
| 32 | 1 | 0 | 0 | 0 |
| 34 | 1 | 0 | 0 | 0 |

[illegible]

| | | | | | | | | | | | | | |
|----|---|---|---|---|----|----|----|----|----|----|----|----|----|
| | 8 | 9 | 6 | 6 | 10 | 13 | 16 | 16 | 18 | 20 | 23 | 24 | |
| 40 | | | | | | | | | | | | | 43 |
| 20 | | | | | | | | | | | | | 20 |
| 21 | | | | | | | | | | | | | 21 |
| 14 | | | | | | | | | | | | | 14 |
| 7 | | | | | | | | | | | | | 7 |

[illegible][illegible][illegible]

Figure 1 is a line graph showing the percentage of total catch versus the number of hauls for four species: 43, 20, 21, and 14. The x-axis represents the number of hauls (0 to 34), and the y-axis represents the percentage of total catch (0 to 40). Species 43 shows a sharp peak at 1 haul. Species 20 shows a peak at 13 hauls. Species 21 shows a peak at 13 hauls. Species 14 shows a peak at 13 hauls.

0 2 4 6 8 10 12 14 16 18 20 22 24

45 _____ 45
39 _____ 39
31 _____ 31
14 _____ 14

AMATEUR CALL SIGNS

JULY, AUGUST, 1953

NEW CALL SIGNS

VK—
2HV—G. E. Vessey, R.M.B. 160, Hume Highway, Bargo.
2AOP—E. A. Parker, Aust. Missionary College, Corambidge.
2AOC—A. O'Donnell, 207 Burraneer Bay Rd., Caringbah.
2AOP—F. Robinson, 35 Coast Av., Cronulla.
1ATZ—J. Zainuddin, 35 Laura St., Newtown.
2ZBM—J. G. Moon, 7 Cadell St., Lismore.
2ZDA—J. J. Abernathy, R.A.A.F. Station, Richmond.
2ZFM—B. C. Milne, 23 Robert St., Narrandera.
2ZJK—R. W. Jeffcott, 180 Wellington St., Sandi.

Victoria
3TI—J. K. L. Matchett, 645 Riverdale Rd., Box Hill.
3VD—C. T. Barrett, Station 23 Dryburgh, C/- West Melbourne; Postal: 300 King St., Melbourne.
3VT—V. J. Hudson, 46 Donald St., Highbury.
3ADG—G. N. Kiden, 1 Myrtle Gr., Blackburn.
3AMK—L. L. McInnes, 142 Roberts St., Yarraville.

3APL—L. J. Laughon, 4 Burns Court, Shepparton.
3AQM—Melbourne University, Electrical Engineering Dept., Carlton.
3ARD—C. P. Ford, St. Helena Rd., Greensborough.
3ZCL—C. K. Blake, Station: Kenty Highway, 3 miles N.E. of Hopetoun; Postal: Box 163, Hopetoun.
3ZVF—M. R. Boudry, 323 Dorset Rd., Boronia.
3ZGA—J. W. Kiden, 200 St. Weribee.
3ZGL—J. W. K. Adams, 13 Albert St., East Malvern.
3ZGL—R. T. Lloyd, 171 Cheddar Rd., West Park.
3ZGR—H. B. Rolfe, "Rowellie," Goomalibee, via Benalla.
3ZGB—W. J. Benaon, 305 Westgate St., Northcote.
3ZGX—K. J. Benaon, 30 Bridge St., Hampton.
3ZGY—C. Y. Thom, 1517 Burke Rd., East Kew.
3ZGZ—J. J. Ferguson, Nichol's Point, via Mildura.

Queensland
4ZBV—J. P. Hayden, 181 Maygar St., Windsor.
4ZBW—S. M. McDonald, Base Squadron, R.A.A.F. Townsville.

South Australia
5BA—Brompton Boys' Radio Club, Cr. 3rd and West Sts., Brompton.
5BB—A. J. Schenke, 58 Stanley St., Crystal Brook.
5DG—D. P. Gryles, No. 87, S.T.U., R.A.A.F., Edinburgh Field.
5GX—C. Wilde, 113 George St., Norward.
5VQ—J. E. Elliott, Cornwall St., Berri North.
5ZBB—R. J. Langdon, Cr. Railway Tce. and Marino Rd., Marino Rocks.
5ZBV—C. A. Appleby, 7 Wolseley Tce., Woodlands Park.
5ZBY—L. Horvath, 68 Penang Ave., Edwardstown.
5ZCB—T. R. Fiebert, 29 Talford St., Hillside.
5ZDC—R. W. Parker, 58 Sixth Av., Ascot Park.

Western Australia
6DL—D. Laws, 18 Coleman Crn., Melville.
6XG—H. C. W. W. Carey, 20 Carey St., Katanning.
6XR—P. D. Roberts, 60 Park St., Katanning.
6ZBD—W. K. Hobbey, Gardiner St., Moora.
6ZBT—C. W. C. C. C., South Western Highway, Yarrloop.
6ZBV—B. R. Pryor, Geraldton House, Marine Tce., Geraldton.
6ZBY—C. C. Glover, 9 Recreation Rd., Waroona.

Tasmania
72Z—J. A. Nichols, 9 Creasy St., Newtown.
72Z—J. A. Nichols, 9 Creasy St., Newtown.
Territory of Papua and New Guinea
8RM—R. H. Murphy, Karanga Rd., West, New Guinea.
8RI—R. H. Hooper, Port Moresby, Papua.

CHANGES OF ADDRESS

VK—
4GY—V. W. Olason, 124 Kareena Rd., South Miranda.
3HG—J. J. Mackel, 13 Hinkler Crst., Lane Cove.
3UT—J. A. Todd, 31 Stania Rd., Dentistons.
3UY—S. E. Burke, Lot 4, Patricia Ave., Charles-town.
3WT—W. A. D. Forman, 243 Warringah Rd., Bondi Hill.
3XK—J. J. Wilson, 278 President Ave., Gymea.

3ZD—W. J. Leech, 30 Edward St., Wages.
3ZS—W. J. Smith, Dymond St., Bargo.
3ABW—E. G. Baker, Havendale Ave., Penhurst.
3ACG—A. Morris-Rice, Blacks Rd., Paxton, via Cessnock.
3ADB—A. A. Chertham, 2 Bellevue Parade, Caringbah.
3ADY—C. McC. Hicks, "El Rancho," Forster.
3ADX—T. T. Hoppold, 388 Fisher Rd., Broken Hill.
3AGI—R. K. Phillips, 15 Gayling Rd., West Wyalah.
3AHY—K. E. Hayles, Dental Hospital, Chalmers St., Sydney.
3ATU—M. M. Sypley, Sun-Herald Bldg., Broadway.
2ALI—J. L. Leeda, Darling St., Menindoo.
3APW—W. Leeda, 68 Hume St., Goulburn.
3AQC—R. W. Wood, 90 Bobbin Head Rd., Turramurra.
3ASR—S. N. Graves, 61 Chester St., Marry-burn.
3AXW—L. N. F. Wade (Lt./Col.), Marine Pde., Maitland.
3ZAR—R. A. Ridgely, 35 Bray St., Dundas.
3ZAU—K. Woodward, Curtis Place Flats, Moorehead St., Berden.
3ZCM—S. B. McGregor, "Delamere," Ross St., Newport Beach.
3ZDB—A. J. Bowman, 107 Cronulla St., Cronulla.

Victoria
3BL—W. T. Lucas, 21 Endell Av., East Preston.
3BP—D. J. Trevill, 113 Walker St., Ballarat.
3CP—R. C. Steele, 12 Roscoe St., Stb. Caulfield.
3IZ—P. D. Williams, 24 Alma St., Maryborough.
3IS—B. J. Coles, Station: Lot 55 Wundawarra Drive, East Kallor; Postal: C/o P.O. Niddrie.
3YD—L. M. Penhew, Lot 8, Merry St., East Ringwood.
3YD—R. W. M. Ross, 471 Buckley St., West Essendon.
2ABX—V. D. Bond, 8 Beauty Av., Mt. Beauty.
3ACI—V. P. O'Brien, Station: 39 Tucker St., Hotham; Postal: P.O. Box 46, Hotham.
3AED—P. A. Delahanty, Lot 11, Alice St., Mt. Waverley.
3AJO—W. R. Iom, 21 Margate St., Beaumaris.
3AJH—J. Hill, 352 Auburn Rd., Hawthorn.
3APR—P. E. Playford, Lot 4, Fordon Gr., Glen Waverley.
3APY—P. J. Dettmann, Station: 63 Duke St., Castlemaine; Postal: 63 Hutton St., Kyneton.
3ARY—R. E. Veste, 36 Elizabeth St., Clayton.
3ASC—S. T. Clark, 62 Janes Rd., East Preston.
3AZB—L. R. Burston, 11 Mount Pleasant Drive, Mt. Waverley.
3ZDK—K. J. McLachlan, 137 Church St., Brighton.
3ZDI—D. H. Goldworthy, Lot 3, Crawford Rd., Marilda.

Queensland
4CD—C. McDonald, 78 Talford St., Rockhampton.
4KE—R. L. Shilton, 34 Naughton St., Rockhampton.
4HM—N. G. Mills, 68 Dover Rd., Margate.
4OH—H. T. Overend, Moesman St., Moesman.
4UK—P. R. O'Sullivan, 173 Walker St., Bundaberg.
4WI—Wireless Institute of Aust. (Qld. Division), C/o A. H. Hinkler, 349 Buckland Rd., Weavell Heights, Brisbane.
4WT—N. J. G. Walling, Flat 4, 31 Eyre St., Nth. Wd. Townsville.

South Australia
5PM—H. N. Bowman, 19 Linden Av., Hazelwood Park.
5MI—W. R. Nottage, 7 Sweet-water St., Bea-combe Gardens.
5PK—T. Haisworth, Otterley Av., Bridge-water.
Western Australia
6CK—C. Hayes, Box 46, Neokatharra.
6ZAH—L. E. Gooding, 4 Kennard St., South Perth.

Tasmania
7ME—H. W. Haneock, 135 Upper Steele St., Devonport.
7PF—P. D. Frith, 131 Tarleton St., Devonport.

CANCELLED CALL SIGNS

VK—
5GP—D. A. Page, 68 Bassett Walls Rd., Lithgow.
5IQ—A. J. E. Robertson, 108 Brook St., Coogee.
2AZK—A. A. Marshall, 84 Railway St., Concord.
3AIC—A. G. Freeman, R.A.A.F. Station, Dubbo.
3AYO—R. C. Puleston, R.A.A.F. Station, Dubbo.
3ZOD—R. H. Dell, C/o S. Davison, Cumnaring.
Victoria
3EA—E. Anderson, 138 Osborne St., Williams-town.
3EP—M. R. Robinson, 329 Hoddlerwick St., Traralgon.
3FN—B. J. Ferguson, No. 3 Second Court, McGowan Ave., W. Preston.

3XA—D. V. Hope, 4 Elm St., Blackburn.
3ABC—W. H. R. Treloar, 32 The Right, Heidelberg.
3ADE—R. F. Everett, 55 Victoria St., Warragul.
3AHE—H. J. Essel, 10 Moore St., Traralgon.
3ASE—D. G. Anderson (Cpl.), R.A.A.F. Station, East Sale.
3ZEF—J. V. Hudson, 48 Donald St., Highbury.

Queensland
4AH—A. L. T. Hadley, 12 Willis St., Annerley, Brisbane.
4BW—A. Couper, Lloyd St., Mareeba.
4ID—I. P. D'Arcy, 30 Bernard St., Brighton, Brisbane.

South Australia
5AG—A. G. Mulcahy, 25 Hart St., Semaphore.
5UM—R. L. Umbarger, U.S.A.F. Team 431, A.A. C/o P.M., Alice Springs.
5GW—H. C. A. Wootick, Radi. Maintenance Section, C/o D.C.A., Coodanats.
5ZKH—G. Wilde, 123 George St., Norwood.
5ZSE—R. E. Connor, 55 Matthews Ave., Seaton.

Western Australia
6SC—R. J. Schofield, C/o CAM Broadcasting Station, Northam.

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HERE is a Station that looks as good as "store bought" and sounds as good as it looks. Ken is an automotive engineer, but he stopped short of using a motor to drive this truck-mounted rig in and out of its cabinet.

In the main unit are the control circuits, main and minor rectifiers, Class B 807 modulators, fully shielded 813 p.s. band-switched from 80 to 10 metres with switched aerial couplers.

A modified Gelsco exciter occupies the centre of the desk, flanked by two receivers: The AR7 has been "warmed up" with a low-noise front-end, ECH33 converter and series diode noise-limiter; and the left-hand unit, still growing, is based on a Gortler coil turret. The latter finds work for 16 valves, delivering a 3 Kc. pass-band in

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the 100 Kc. second i.f. stage, with a Q multiplier and peaked audio.

Yes, there is a key and it gathers no dust!

Outside, Ken has a three-element 20-15 metre rotary, desk-controlled, with selsyns to point the way.

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L.T.U. FUND DONATIONS

The results of the above appeal to date are most encouraging, but we have still to achieve our target of £2500 to enable us to send our delegate to the Geneva Conference in 1959. We had hoped to reach our target by December this year, but if this cannot be realised, donations after this date will still be very welcome—in fact, we will continue to take them as long as the member still subscribes. Many members have subscribed more than once—to those go our most grateful thanks, but this is no reason for those who haven't subscribed as yet to withhold their valuable donation.

Please send YOUR donation in cheque, money order or postal notes to the under-mentioned address—

Federal Secretary,
Box 5511W, G.P.O.,
Melbourne, C.I.

The following list is current as at the 7th November.—

- £20/0/0
R. Pike, VK1ACU.
Trade Donation—Dupon Condensers.
£12/5/0
S.W. Zone Convention at Canberra.
£5/5/0
W.I.A. Hunter Branch N.S.W. VK1AWX; L. D. Bowie, VK1ADU; Dr. W. J. Hart N.S.W.
£5/0/0
Canberra Radio Society, VK1ACA; Griffith Radio Club, VK1AGJ; R. G. Garrett, VK1ERG.
£10/0/0
W. R. B. Stitt, VK1AWH.
£3/5/0
R. H. Cunningham, VK1MIL.
£2/0/0
G. Kempton, VK1CCL.
£1/5/0
A. F. Elliott, VK3AEL; Dr. B. R. Meldrum, VK3EM.
£1/0/0
G. E. Heinrichs, VK0KT; C. Cowan, VK1PZ; P. Page, VK3APP; K. Woodward, VK3EAU.
£1/10/0
G. B. C. Semmens, VK1G5; K. A. Lawrie, VK3AK.
£1/5/0
D. Robinson, N.S.W.
£1/1/0
G. F. Cole, VK1DI; T. F. Pyke, VK3ZZ; C. A. Mackenzie, VK3ACM; N. McI. Cameron, VK3NC; A. Parkes, VK3MO; K. J. Lambeth, N.S.W.
£1/0/0
J. Hazelwood, VK1AAT; A. Morales, VK1AEM; J. Edgar, VK1AOP; L. Patison, VK1ALU; A. Barnes, VK1CE; A. Philbin, VK1EU; F. Adams, VK1JD; L. Sinclair, VK1JMH; E. Arnold, VK1KO; W. Symons, VK1ZMS; A. Mather, VK1JZ; K. Oliver, N.S.W.; B. Valentine, N.S.W.; H. Selman, VK1CM; T. Barnes, VK1TB; P. Evans, VK1OZ; B. Learmonth, VK1QM; D. G. Anderson, VK1AAB.
H. Tills, VK1WO.
F. Bentley, VK1MZ; K. Yates, VK3RP; C. Waterlander, VK1WA; A. Martin, VK1MA; M. Vivian, VK3FO; J. Haseldine, VK1JC; L. Yake, VK1NO; L. Brice, VK3OK; R. Kopp, VK1SS; H. Stacey, VK1KA; L. Werner, VK1JN; K. Ring, N.S.W.
T. Berg, VK3ZAF; J. Moran, VK1JN; R. Coghlan, VK3RC.
Schumann, VK1GA; E. Burns, VK1GB; M. Kirby, VK1TR; R. Bulman, VK1TU.
Under £1/0/0
W.I.A. N.S.W. Division, VK3W1 (5/0); H. J. Allen, A.C.T. (10/); E. St. Clair, S.A. (10/-).
The progressive total receipts to 7th November are £1,591/17/2.

PERMITS GRANTED FOR TELEVISION EXPERIMENTS

- VK— New South Wales
1A2K/T—K. Whelan, 87 Kent St., Ryde.
2A1W/T—G. D. Wheaton, 788 Anzac Pde., Kingsford.
3A2N/T—J. L. Fogson, 57 Redgrave Rd., Northmead.
2ZC1/T—J. Dempsey, Farm 75, Yanco.
Victoria
3A0N/T—A. J. Henry, 1 Rosshire Rd., Newport.
3A7V/T—J. A. Hampel, Flat 4, 22 Hampton St., Hampton.
South Australia
5M/T—J. R. S. Coombe, Fozzard Rd., Stirling West.
5ZC/T—A. C. Reckner, 36 Payneham Rd., St. Peters.

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are available in working voltages of 200, 400, 600 Volts D.C. and 300 Volts A.C. in values up to .04 uF. They have a "self-healing" feature which allows the capacitor to withstand accidental over-voltage. Type W99 are capable of operation in temperatures of up to 85°C. (185°F.).

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MINIATURE METALLISED PAPER CAPACITORS

cover the range .05 uF to 2.0 uF in working voltages of 200, 300 and 400 Volts D.C. They also feature the valuable "self-healing" property, and 85°C. operation. Type W48 provide higher capacitances in a smaller size; hence more efficient filtering for the available space.

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Wm. J. McLELLAN & Co. Pty. Ltd., 126 Sussex St. Sydney. BX 1131

(Continued from Page 18)

-Logs have been received during the
from the following stations: VKa 2ZRI,
ZAC, 2AGL, 2ABR, 2ZGG, 2ZDP, 2ZCF,
AGY, 3BW, 3PG, 3DDE, 3ZBH, and second
3GC, 3RO, 3KA, 7LZ, 3B, and second
at from 4AZ. Jock 4ZDC thanks them
requests that any further logs should,
which contain the following information:
tion of opening; (3) area worked; (3)
propagation if known; and (4) times
The last may sound strange, but a
the logs so far received did not contain
formation, vital in itself for graphing
active periods.

This opportunity to wish everyone a happy Christmas and a Most Successful Year. My thanks go to the many correspondents from Divisional V.H.F. scribes through all Hams to the listeners, only without aid and co-operation these notes would be non-existent.—F. O'Dwyer, 30F.

NEW SOUTH WA

aps, well October has been a very
th for v.h.f. activities and started off
well attended meeting at which an
lecture was given by Keith 1ZAV
lum rectifiers.

pre—The meeting date coincided with initiation of a practical effort by the Group producing 144 meg. converter kits, which applied to some 40 members. Considerable preparatory work was necessary to the final result and credit must be given to Bob 30A for design and preparation of the kit for the prototype unit. Also to NF who acted as an independent technician, and to Barry 32AG for supply of components, 32AH procurement of chassis, and 32C and 32A for who worked on the kit after manufacturing the parts. Committee sincerely hopes that these conversions will assist more stations onto 144 megs. Other units will probably be available

tant.—Who said a fox couldn't hide as well as not to be found in 1 1/2 hours? ZC/ZATO, John and Cec. did just this, with an extension of time some did rubbish tip and the very obscure track led into the scrub. 1PM/2ER came in followed by 2ZBG/2RX second.

able.—Winner of the October Scramble
is 22CF who in usual form topped the
with 18. 2WL/20A. 2RX. 17. 2ZCH 16.

Blue Mountains Day—V.H.F. appetites were whetted on this outing and was attended by Sydney members. Cues were taken by 22CF (acramble) and 2AWZ (fox Country members) were present included 2RV and much v.h.f. rag chewed. Voting the day a thorough success compliment to the Blue Mountains

Up.—As at the time of writing, seven-
te scheduled for November are yet
r, however results of these, including

During December there will be the meeting which will include an auction surplus gear and a lecture by Jim. There will be a special mobile fox Saturday evening, the 13th, starting Thompson Street, Drummoyne, and finishing 2PM's QTH for a Christmas supper. Don't miss it. Also there will be the Christmas Scramble towards the end of the year.

Our thanks go to Charlie ZAZK who aided Morse practice over the month. We feel confident that most of his projects will succeed.

There have been some openings to
ever by the time you read this the
and we really want good again.
LAG has completed the 96 Mc. r.f. unit
and the remaining items are in hand
here.

Quite a few of the **gang** have
the sick list and include 2RX, 3PD,
ZCP, and 2AWZ, but are all on deck
A welcome is extended to new sta-
2ZJK, KBV, ZKFC, BO 2ZEL, and
2DB. Phil ZBVB's family have an
and we are pleased for Phil's XYI,
and most of our fox hunts. Doug
and Stuart ZZOZ have been heard in
Dave Z2AQ was farewelled and we
his operation on 144 meg.

to nears the end of another year, and
of the V.h.f. Committee and Group,
Merry Christmas to all.—JAWZ.

VICTORIA

res.—October was the best month for for some time and quite a few break-
s, both to VK4 and JA, occurred. Com-

pared with October 1957, the 1958 season looks as if it will be much better. If the VK3 gang have any say in the matter, the 6 mx band will be open in the New Year as quite a hard core of resistance to the closing of the band exists. Ian 3ATZ, has sent letters to the A.R.R.L., J.A.R.L. and N.Z.A.R.T., pointing out that interference will arise to Amateur Services in those countries from Channel 1 t.v.

Jack ZDQ is busy processing the logs forwarded from the Australian States.

Commencing the 1st of December, an all white tv picture with sync signals on 54 219 m/c. will be radiated from the Russell Street Telephone Exchange, with an e.r.p. of 300w. The signal which is beamed towards Brisbane, will be on the air from 1400-1700 hrs. E.A.S.T. Reports from VK4 are welcomed and should be forwarded to R. Neal, VK3ZAN, C/o, VK1 W.B. Group, W.I.A. 181 Queen St. Melbourne.

October 6 mx scramble including JA5ADX, operating marine mobile from the "Meibourne Maru". The winner was Jock ZGDO, with 18 contacts, second was John Z3AI, with 15 contacts, and Tim ZA7Y filled third place with 14.

1 Meirez.—Seventeen stations participated in the second of the 1 mx scrambles and the winner was Ray ZSQ, with 12 contacts, ZCZH and ZGE were equal second with 11 contacts each.

1 Metre.—The initial burst of enthusiasm seems to have died down, but some contacts have been made during October from Melbourne to Moa and Geelong.

Field Days.—The December Field Day will be held on Sunday, 21st December. If you intend going portable, drop a line to John 3ZAI, who will make your location known on the 3WT broadcast.—3ZAI.

QUEENSLAND

VK4 very busy collecting logs, a good response to date. DX still good. Still lots of JA with some good openings to VK3 and VK5 plus a few brief ones to VK3.

Douglas JAFA heard from local Brisbane station 4ZBY working all locals. Max 4HD received his A.J.D. award during the month; said DX fair at Buddenrum Mt. QNG and 4ZAZ, still keeping the DX busy. Solo checking gear says Rube 4ZGZ has a COG 4000, 1000 watts, some nice 50 Mc. plus 3 mhz mobile, nice work. gear looks good, too. Bruce 4ZBD closed to A.J.D. award off his indoor dipole; think was a set him. way the JAa call him; doing good on trading. Doug 4ZGZ will help case to retain 50 Mc. Anyone requiring a kangaroo xtal for 50 mcg., contact Mick 4ZAA.

Many thanks to country members for your

The gang have their beams south, looking, listening and waiting, won't be long, we hope.

SOUTH AUSTRALIA

Well at last I can write about some DX contacts on 80 Mc. Our first opening was on Sunday, 12th, when the JAs came through be-

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- ★ Go Mobile at low cost. 12v. Vib. Trans., 180v. to 365v. 80 mA., ex No. 22 Sets. 15/- or two for 25/-.
 - ★ High Voltage P. Supplies, 850v. d.c. 200 mA., plus many extra parts, in metal case, £5/0/0.
 - ★ Fil. Trans., high volt. insulation, 3 4v. windings, ea. c.t. 2 amps., new, 25/-
 - ★ High Volt. Trans. for c.r.o., etc., 2,300v. aside, 4v. c.t. fil. (new), 36/-
 - ★ Heavy Duty H.T. Supply, 700v. and 250v. and 4v. windings, 350 mA. (at least), £5/18/0.
 - ★ Heavy Duty Plate Supply, 600v. to 900v., 3 tappings, no Fil., as new, 500 mA. (at least), £8/0/0.
- (All above units are 230v. 50 c.p.s. operation)
- ★ Audio Specials: New and as new, all one price, 10/—600/60,000 ohms Line Trans., 600/150 to 600/150 ohms Line Trans.
 - ★ Few Beams left, 2 metre and 5 metre, £9/0/0 each.
 - ★ Block Condensers, 16 mfd. 525 p.v. high quality, 7/-.

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Mall Orders E.O.R.

tween 1 and 2 p.m. The next opening was Wednesday 15th, 1235 to 1330 hrs. Two JALLs were first heard working VK4, then into our QTHs. It would appear from a careful study of the weather map that these openings coincide with bursts of heat in the north of the State. In between these openings, Bob AND was heard and worked at various times and dates.

The 18th was fair weather day for Comps 5K6 with a nice opening to VK6, working 6H0 and six others. Managed to work Mick 0Z8F who is located at Wagin, about 150 miles north-east of Perth, before the band folded. I understand the VK6 boys had been hearing VK6s for a full hour before Comps made the initial contact.

The JAs were in again on the 18th at 11 p.m. and the 20th at 6 p.m., and Ron SMK logged a considerable number with his 130W. nice going Ron. October 28 was red letter day for Col BRO, with family sickness, decided to stay home that day and between 1100 and 1600 hours worked 25 JAs, including those hard to get JAs. The band again opened up between 1800 and 1900 hours.

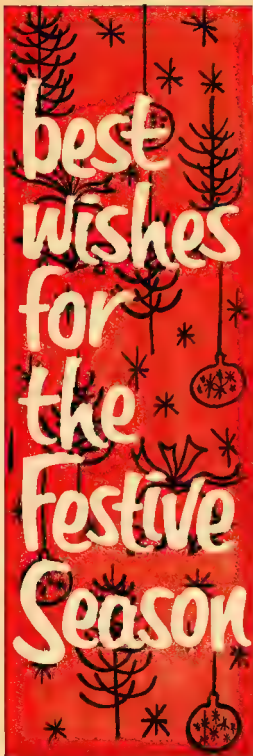
VKS takes pride for its efforts in introducing JASADX to the 50 Mc. band. Seik JASADX has been a regular contact for the d.c. boys, operating mobile marine. During his visits to VKS he made firm friends with 3MK, 5ZAX, 3MK, 5RO and a few others, being v.h.f. types they quickly worked out a position on the ship 80 ft above the water line where a

st. beam could be placed and promised Belk that he would be fully equipped for 50 Mc. next time he was in Vicks. Compa SEP supplied the water and the equipment for the 125 Kc. antenna and built the power supplies and the antenna. Belk with B-11 supplied and built the converter. There was a last minute rush and the equipment was installed and working 10 hours before the ship was to leave. The ship was not strong enough to be JASADN's first 50 Mc. contact and am looking forward to his card. From information received, Belk is enjoying his 50 Mc. mobile marine contacts and it seems rather unfortunate that this man is treated to no other ship trading between JA and W and

My stop press news is from Col BRO who has just received an airmail letter from KORNQ who with WSSUE heard a VKS two letter call testing an 80.000 at 0730 S.A.T, on Oct 25, 1945.

TAEHANIA

Col 7LZ is on 50 and 144 Mc. as usual. He now has a 388 Mc. xtal rig with a QQVOS in the final going OK—a xtal osc. chain for the converter, but no r.f. or mixer stage as yet. The 238 Mc. beam should be finished shortly. TPF is now at Devonport and has an excellent QTH 7BL is at Stanley and can hear Channel 3 every day. Both promise to be active on 144 Mc. this season. TPF is stirring up 144 Mc. activity on the N.W. coast. Only 7BQ and 7LZ are in Launceston now.—7LZ.



We at A.W.V. take this opportunity to extend to our many friends the sincerest of best wishes for a

*Happy Christmas and a
Prosperous New Year*



RADIOTRON

**AMALGAMATED WIRELESS VALVE
CO. PTY. LTD.,**

47 York Street.

Sydney.

DX

Frank T. Hine, VK2QL
30 Abbottsford Road,
Homebush, N.S.W.

Only one contributor commented regarding the use of QSO path and time in these notes and that was in agreement with my own thoughts so unless a change of mind takes place with DXers we carry on as usual.

During the month I had visits from four of our contributors—VK6CK, VK6AC, VK6WIA-13022, and was naturally pleased to see them, in the case of 3CX and 4EL, not for the first time though.

With the growth of the number of the VK boys who are becoming interested in collecting DX certificates, I think somewhere in the magazine, and this page is probably the right spot, being the details of certificates should be given. I see some details of Awards, 3RJ sees some, and readers see some on cards they receive. So what do you think Mr. Editor? I have one or two ready now. Maybe it could go under the Awards section.

[It is the policy of this journal to publish any new Awards that are issued as the details are supplied. Also any amendments or cancellations to existing Awards are treated similarly. At present the number of Awards in existence throughout the world is too great to list them all, even some each month. A comprehensive list of Awards appeared in the 1989 Australian Radio Amateur Call Book—Editor.]

My suggestion in May "Amateur Radio" for having something stable for the granting of Awards instead of the Country "Air Race", has been received well in many quarters overseas and here. September issue of "Short Wave Magazine" makes comment on it, to whom my suggestion was forwarded by VK 3RA. They are going to comment in a later issue.

NEWS AND NOTES

On my latest QSL from Danny Weil whilst at VP7VE, a rubber stamp reading "Attractive Yarns II. Contributors Certificates are available on request upon specific request. Enclose 12 cents for Airmail, 6 cents regular." This is in addition to the rubber stamp which was used for financial assistance for the DX-pedition.

One of the outstanding DX boys, W1NWK, has decided to pull the big switch and is selling everything but his QSLs. (Can't see that one).

If you missed the recent DX-peditions to VQ1, another chance will be given when VQ4ERR, working s.a.b. and c.w. only, will be back there in late December.

I chased VQ1QO on 31 Mc. the other morning, but think it is just one of the "phones" that are turning up on the bands. He was not known by any of those watching the VQ1 movements.

VQ1QO should be heard on 31.320 KC. soon, crystal controlled. He has been reported on 16 Mc round 2200z.

If you have not received a QSL from HE-1AB for February to April 1966 QSOs, try another card to W1UDU, who operated the station for that period. Many cards sent to him are being supplied to me.

ZS9GV is expected to operate from the Seychelles shortly. Dates at present unknown. The following stations are expected to be active on phone: UT7FB, UG6AO, UG6AL, UG6KAA, UG6KAC, UJ6AG, UJ6KAA, UL7BS, UL7CA, UL7LB, UL7LA, UL7LO, UN7AB, UN7AF, UN7AG, UN7AKA, UN7AL, UN7AA, UM6AC, UO6PK, UO6AM, UO6IT, UO6AA, UZ6AO, UZ6BU.

EA6BA is active on 21 Mc. round 19-2000z and CE6AD on c.w. round 2100z.

FE7ZD is reported on 14035 c.w. round 1800z on week-ends.

For those chasing WPK, OQ6PD is active on 31 Mc. phone 17-1800z week-ends.

If you have been chasing M1ZZ, don't waste your time as he is no longer DX at 3900z.

My previous comment regarding activity in Pakistan being forbidden was incorrect, as all we were told was that in Ceylon it is known that only members of the Armed Forces can operate Amateur equipment.

Call signs and prefixes worked a zero time—GMT.

MF4BW is active on s.a.b. on 14 Mc. round 2200z.

MF4DAA is in a QSL see his lat. and Long. are 25° 10' N., 53° 52' E. That will help you to spot where Das Island is, as it is not on most maps.

It is anticipated that this will be given separate country status by A.R.R.L. as it is entirely separate from Bahrain, and under entirely independent sheldom.

Do not pass VF4AC/GN by as he has been granted separate country status by the A.R.R.L. He is located in French Guinea.

VF5MA can work 3.5 to 29 Mc. and is quite keen to try 7 Mc. Constant time on one of the higher bands, and if propagation conditions are suitable he will be willing to try 7 and even 3.5 Mc. His only other country prior to our try on 7 Mc. was in case you are not aware, he is located in the Maldivian Islands. CE6AC is active from Easter is on 14 Mc. c.w.

KASAC is active on 14 Mc. varying spots, round 0700z and KASAB seems to follow a similar pattern.

SM5W/LA/P, LA2TD/P and LA2J/P are all active from Splitisberg. Have heard SM5W/N being called round 0700z and 3000z. Another possibility is LA2CG/P reported on 28 Mc. c.w.

LX1ME is active on 30 Mc. and he is OK for a QSL.

OT7ME was expected to show up on 14 Mc. s.a.b. on Nov. 16. Whether this was for a brief spell or not I do not know, but hope you s.a.b. boys found him.

VF5A/A was expected to show up from Oman during November.

ZS9G is active on 21 Mc. phone and has been heard very strongly in Sydney in the late afternoon.

There is quite an amount of confusion at the present time of the authenticity of the EA calls being heard. There is supposed to be no legitimate operation from Albania, but calls heard have been ZAIAM, ZAB, IAB and ZTC. Corbin is now represented by FC6B/FC. He has been heard over round 0700z and 14 Mc. and 2000z on 31 Mc., but does not seem very interested in working all who line up for him. It is heard about 2000z and 2000z.

KUW1 is currently represented by KE1AM, SK1AT, KX1AZ, KE1AQ was G3FPU.

CR16AA is still anxiously awaiting arrival of a generator, his batteries having given out. The progress report on this is that it has been received and shipped to him. It is in the custody of CR16A's XYL and is stored in her stateroom. She and CR16A are on their way back to Portugal.

VP7FF is active on 7 Mc. and higher, his QTH being Grand Turks Is.

SV9VH is keeping Rabbits on the air with phone, but a U.S. notice is now active on 21 Mc. c.w. using the call of SV9WAE. Don't try any fast stuff on him. He is a very slow operator.

Turkey has now banned Amateur Radio. In fact it has been banned since 1963, so there is little doubt in view of information available to A.R.R.L., and others, that any QSOs with Turkey since 1963 were with illegal stations and will not be eligible for DXCC (A.R.R.L.) credit.

VIE is operating both 14 and 21 Mc. phone.

VQ3ED is ex-DX6BX. Apparently many are still looking for cards from his ZDI activity, so as VQ3ED is quite active on a number of bands, you should be able to do something about it.

KW1J and KW1K work 14 Mc. on alternate nights. This is two Jims, so do not pass it by as ordinary EA station as it carries separate country status.

Authenticity of SW7FM is at present doubtful. It seems to be the Puerto Rico signal line into Europe to be certain.

Do not pass all PYT stations by as another Brazilian PT7AFN, PT7YC and PT7LE are active from Fernando de Noronha. Increased activity from him is quite possible as the locale becomes more proficient with their English. All cards should be addressed Phil Hendricks, RC4A-1, c/o the Bureau AAFB, Fort Pickle AFB, Florida, and mark your envelope "attention PYT".

Activity on s.a.b. from TIS, Coos Bay Islands is planned for March or April 1966 for about one week.

KR1EF is another that you should not pass by. He is located on a small island, and by the rules of A.R.R.L. DXCC is eligible for credit.

Trinidad OMAS is represented currently by SP4T on 14 Mc. phone.

2D4DY has been putting in a very strong signal to the East Coast round 2000z on 14 Mc. A change has been made in the Danny Weil hierarchy from that published last month. The new one is Montserrat (finished here), An-

THE OPERATIONS OF VK6CC DURING 1986

DX EDITOR "A.R."
Dear OM,

I will be operating from Manquarie Island in 1986 (January to December) under the call sign of VK6CC. Operations will be on c.w., s.a.b., and s.b. Once a routine operating schedule has been established, I will endeavour to allot specific days for working DX stations and other days for VK working only (I have already notified "QST" and "CQ" magazines that I will now QSL any DX station that breaks in on my VK QSOs). By such an arrangement it is hoped that the needs of all will be satisfied.

VK6FP has been kind enough to offer his services as my QSL Manager—hence prompt QSL is ensured. I feel that I am very fortunate to have VO's services.

QSLs will therefore be via VK6FP under the following conditions:

- (a) QSL cards received via the Bureau will be replied to via the Bureau.
- (b) Any QSLs accompanied with I.R.C. coupons will be replied to my direct mail.
- (c) All cards MUST clearly indicate the time of the QSO in GMT to facilitate rapid log entry-checking.
- (d) QSLs will be on a card-for-card basis only.

It is hoped that I can find time to work a lot of Hams throughout the year. I will be working those who require a VK6 s.a.b. QSO and QSL.

—Clive Cooke (VK6CC, ex-VK6CC).

guilla, Dominica, Guadeloupe, St. Vincent, Grenada, and due to arrive in April. WAC7N is now QSL Manager for the following: VQ1, VQ2, VQ3, VQ4, VQ5, VQ6, VQ7, VQ8, VQ9, VQ10, VQ11, VQ12, VQ13, VQ14, VQ15, VQ16, VQ17, VQ18, VQ19, VQ20, VQ21, VQ22, VQ23, VQ24, VQ25, VQ26, VQ27, VQ28, VQ29, VQ30, VQ31, VQ32, VQ33, VQ34, VQ35, VQ36, VQ37, VQ38, VQ39, VQ40, VQ41, VQ42, VQ43, VQ44, VQ45, VQ46, VQ47, VQ48, VQ49, VQ50, VQ51, VQ52, VQ53, VQ54, VQ55, VQ56, VQ57, VQ58, VQ59, VQ60, VQ61, VQ62, VQ63, VQ64, VQ65, VQ66, VQ67, VQ68, VQ69, VQ70, VQ71, VQ72, VQ73, VQ74, VQ75, VQ76, VQ77, VQ78, VQ79, VQ80, VQ81, VQ82, VQ83, VQ84, VQ85, VQ86, VQ87, VQ88, VQ89, VQ90, VQ91, VQ92, VQ93, VQ94, VQ95, VQ96, VQ97, VQ98, VQ99, VQ100.

For those chasing VQ6C, VQ6D, VQ6E, and VQ6F can be added to your list (BAQM). VQ6G has been heard from the French Islands. Whether VQ6I becomes SM1, I am unable to say at this stage.

Operation from ZS1, Seacrest Is. is still expected towards the end of the year. Alaska, KL7, becomes the 49th state for W.A.S. award from Jan. 1.

Despite thoughts that UA1BE was operating from Frase Is. (Barents Is.) it is not so, so do not let your blood pressure rise when you hear him.

Fallas, I am in trouble. I find I am getting more and more material for these notes, and space apparently not available. The list of s.a.b. stations some of you were looking for was cut down from 200 to 100. I doubt if space will be available this time and possibly some of the other sections of the page may be out also.

ACTIVITIES

7 Mc.: KAME, VQ1RU, ZEEFC, SOL; V8MA, BE1BIE, CO2GR, DL, HE, HC1M, JA, IBEK, JA6M, JAZU, JATOW, KAPFW, KHE, KJ6B, KJ6C, KJ6D, KJ6E, KJ6F, KJ6G, KJ6H, KJ6I, KJ6J, KJ6K, KJ6L, KJ6M, KJ6N, KJ6O, KJ6P, KJ6Q, KJ6R, KJ6S, KJ6T, KJ6U, KJ6V, KJ6W, KJ6X, KJ6Y, KJ6Z, KJ7A, KJ7B, KJ7C, KJ7D, KJ7E, KJ7F, KJ7G, KJ7H, KJ7I, KJ7J, KJ7K, KJ7L, KJ7M, KJ7N, KJ7O, KJ7P, KJ7Q, KJ7R, KJ7S, KJ7T, KJ7U, KJ7V, KJ7W, KJ7X, KJ7Y, KJ7Z, KJ8A, KJ8B, KJ8C, KJ8D, KJ8E, KJ8F, KJ8G, KJ8H, KJ8I, KJ8J, KJ8K, KJ8L, KJ8M, KJ8N, KJ8O, KJ8P, KJ8Q, KJ8R, KJ8S, KJ8T, KJ8U, KJ8V, KJ8W, KJ8X, KJ8Y, KJ8Z, KJ9A, KJ9B, KJ9C, KJ9D, KJ9E, KJ9F, KJ9G, KJ9H, KJ9I, KJ9J, KJ9K, KJ9L, KJ9M, KJ9N, KJ9O, KJ9P, KJ9Q, KJ9R, KJ9S, KJ9T, KJ9U, KJ9V, KJ9W, KJ9X, KJ9Y, KJ9Z, KJ0A, KJ0B, KJ0C, KJ0D, KJ0E, KJ0F, KJ0G, KJ0H, KJ0I, KJ0J, KJ0K, KJ0L, KJ0M, KJ0N, KJ0O, KJ0P, KJ0Q, KJ0R, KJ0S, KJ0T, KJ0U, KJ0V, KJ0W, KJ0X, KJ0Y, KJ0Z, KJ1A, KJ1B, KJ1C, KJ1D, KJ1E, KJ1F, KJ1G, KJ1H, KJ1I, KJ1J, KJ1K, KJ1L, KJ1M, KJ1N, KJ1O, KJ1P, KJ1Q, KJ1R, KJ1S, 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FEDERAL

Fed. President: G. M. Hull, VK2SS.
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 Victoria—Dave Wardlaw, VK3ADW.
 Queensland—Arthur Wall, VK4AAW.
 South Australia—Rich. Richards, VK3DQ.
 Western Australia—Ron Hugo, VK3OKW.
 Tasmania—Doug Fisher, VK3AE.
 Papua New Guinea—Rus. Coleman, VK3KKK.
 Fed. Contest Committee: Reg. Harris, VK3HR.
 Secretary: Bob 1234K, G.P.O., Adelaide, S.A.
 QSL Bureau: R. E. Jones, VK3RJ, 33 Landale Street, Box 811, E.I. Vic.
 Awards Manager: A. G. Weynton, VK3XU, 3 York Street, Bondi Beach, Vic.

NEW SOUTH WALES

President: Perc. Healy, VK3APQ.
 Secretary: Norm Beard, VK3ALF, Box 1794, G.P.O., Sydney.
 Meeting Night: Fourth Friday of each month at Science House, Gloucester Street, Sydney.
 QSL Bureau: Box 1734, G.P.O., Sydney. Frank Mine, VK3QL, Manager; assisted by Allan Smith, VK3AIR.
 Zone Correspondents: North Coast and Tablelands: Noel Hanson, VK3AHR, Ryan Ave. West Kempsey; Hunter Branch: R. W. Rowe, VK3AQR, 17 Brook St., West Wallarah; Coalfields and Lakes: H. Hawkins, VK-2YL, 8 Comfort Ave., Cessnock; Western: W. Ellis, VK3WV, 1000 Sydney, Forster; Central Coast & Southern: E. Fisher, VK3DY, 3 Orinda St., Warrawong; Sth. Western: J. W. S. Edge, VK3AJQ, Wallace St., Coolman; Tamworth: S. Smith, VK3APJ, 50 Upper St., Tamworth.

VICTORIA

President: F. G. Ball, VK3SY.
 Secretary: J. R. Lancaster, VK3JL.

FEDERAL

EXTENSION OF USE OF 50-54 Mc. BAND

As a result of an application from the Federal Executive of the W.I.A., the Postmaster-General of the U.K. has agreed to the use of the 50-54 Mc. band by Australian Amateurs for an extended period to 31st December, 1966, conditional upon arrangements thereof on one month's notice if such action should prove necessary.

Use of this band was granted for the Geophysical Year which at the time of application was to officially end on 31st December, 1966. The current extension for the use of the band will permit another twelve months in which Amateurs can continue their activities in relation to geophysical data collecting.

For economic reasons the Department will not officially notify every licensed Amateur and have asked the W.I.A. that the provision be circulated through "Amateur Radio" and over W.I.A. Divisional Broadcasts.

CONTEST CALENDAR

Compiled by W.I.A. Fed. Contest Com.

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ROSS HULL MEMORIAL V.M.F.

Dates: 1st Dec. 1956, to 31st Jan. 1959.
 Dates: All v.m.f. bands.
 Rules: Same as for 1958-59.
 Special Award for greatest distance over 3,000 miles.

NATIONAL FIELD DAY:

Date: Sunday, 25th January, 1960.
 Bands: 1.1 f. (H.) 5 V.L.F.
 Rules: As published in Sept. "A.R.", page 16.

B.E.R.U. C.W.:

Dates: 0601 GMT, 17th Jan., to 2300 GMT, 18th Jan., 1959.
 Bands: 3.5, 7, 14, 21, and 38 Mc.
 Rules: As for 1958.

W.A.E.D.C.

Dates: C.W. 3100 GMT, 9th Jan., to 2100 GMT, 11th Jan., 1959.
 Bands: 3.5, 7, 14, 21, and 38 Mc.
 Note: Owing to lack of support last year to the Phone Section, this section has been deleted this year.

OK DX CONTEST:

Date: December, 1958.
 Rules: All h.f. bands.

NOTES

Administrative Secretary: Mrs. May, C.O.R. House, 101 Queen St., Melbourne, C.I. Vic.
 Meeting Night: First Wednesday of each month at the Radio School, Royal Melbourne Technical College.
 Divisional Sub-Editor: V. M. Jones, VK3YE, 7 New St., Surrey Hills, E.I.O.

QSL Bureau: Inwards and Outwards—W.I.A., 101 Queen St., Melbourne, C.I. Vic.
 Zone Correspondents: Western: W. J. Kinella, VK3KAW, Magdala, Luback; South Western: W. Wines, 48 Cranley St., Warrnambool, and W. Zimner, VK3AWZ, 76 Skene St., Newtown, Far North Western; M. Folie, VK3GZ, 101 Lemon Ave., Mildura; Midlands: R. Johnson, VK3ND, Farnsworth St., Castlemaine; North Eastern: L. Ellison, VK3ALE, 71 Orr St., Shepparton; Eastern: J. Spark, VK3AFK, 20 Marshall Ave., Moe.

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 Secretary: W. J. Rafter, VK3AF, Box 633J, G.P.O., Brisbane.
 Meeting Night: Fourth Friday in each month at the Service Union Rooms, Elizabeth Street, Brisbane.
 Divisional Sub-Editor: A. Simpson, VK3AE, 63 Baden Powell and White Sts., Everton Park.
 QSL Bureau: Jack Flett, VK3AF, Vanda St., Buranda.

Zone Correspondents: Maryborough: R. J. Glasgow, VK4RG, 80 North St., Maryborough, Townsville: R. E. Wilson, VK4RW, Hogan St., Stuart, Townsville.

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President: B. W. Austin, VK3CA.
 Secretary: J. C. Haseldine, VK3AC, Box 1234K, G.P.O., Adelaide. Telephone: M 7831.
 Meeting Night: Second Tuesday of each month at 17 Waymouth St., Adelaide.
 Divisional Sub-Editor: C. E. Daw, VK3EF, P.O. Box 44, Gawler, S.A.
 QSL Bureau: G. H. Sloan, VK3RS, 17 Belair Rd., West Mitcham, S.A. (Inwards & Outwards).

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 Secretary: J. R. Elms, VK3BE, Box N1002, G.P.O., Perth, W.A.
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 Divisional Sub-Editor: J. R. Elms, VK3BE, 29 Central Road, Kalamunda.
 QSL Bureau: Jim Rumble, VK6RU, Box 7819, G.P.O., Perth, W.A. (Inwards and Outwards).

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 Secretary: K. E. Mullin, VKTKA, Box 371B, G.P.O., Hobart.
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 Divisional Sub-Editor: W. W. Watson, VKTYT, 85 Brooker Ave., Moonah.
 QSL Bureau: J. Butcher, VK3JB, 29 Willowdale Ave., Launceston.
 Zone Correspondent: North Western Zone—Terry Tongt. Northern Zone—Ray Waldon.

PAPUA-NEW GUINEA

President: F. N. Nolan, VK3PN.
 Secretary: C. A. Greenville, WIA-L5004.
 Divisional Sub-Editor: E. Clark, WIA-L5001, P.O. Box 204, Port Moresby.
 QSL Bureau: D. S. Brown, VK3BS.

FEDERAL QSL BUREAU

Oscar Reyes Sosa, Carmen No. 277, Vibora, Havana, Cuba, an a.w.l., is anxious to receive a letter from his Australian contacts.

David A. Helton, W6PHE, of Jefferson City, Missouri, U.S.A., writes: "I would like to pass some information that might be of value to 80 metre men in the VK/ZL area. For the past few years there has been a South American h.c. station harmonic that rolls in here on 3512 Kc. whenever conditions are favorable for any DX at all. I do not know if it can be heard in your area, but it serves as a good beacon at times during the evening hours. It builds up to 87 in the mornings and takes out any VK or ZL who happens to choose that frequency. It is heard regularly on 14 Mc. c.w. through 14 VK/ZL signals are best heard on 80 metres during the September/March period from 1100 to 1500 GMT."

It is GOCX to hear regularly on 14 Mc. c.w. and the operator, Maurice Prost, sends his best wishes to those VK operators who served with him in 456 Sqdn. R.A.A.F. during World War II. Maurice is now at 18 Northbourne St., Hayes Bromley, Kent, England.

The Liga Dos Amadores De Radio Do Estado da Bahia, Caixa Postal 404, Luanda, Angola, desire to hear from any VK station who has not received a QSL for an Angola contact. They will remedy the situation speedily they say.

The V.E.R.O.N. (Netherlands) Section of the I.A.R.U. Traffic Bureau, Box 6011, The Hague, Netherlands, send a long list of the awards issued by this body. Anyone interested may obtain the information from the VK Awards Manager to whom the list has been passed.

Rob Quirk, VK3SD, ex-VK3BG of Macquarie Island, dawdled through Melbourne during late October and early November. Rob has taken an appointment with the Public Service in a radio capacity and will be stationed at Port Moresby. Rob has moved all his gear including XYL and son and expects to be part of the scenery for many years. His call sign, which he expects to air prominently and frequently, will be VK3RO.

—G. W. Jones, VK3RJ, Manager.

FEDERAL AWARDS

DXCC-BRITISH PHOENIX ISLANDS

Up to the present the British Phoenix Islands have been omitted from the DXCC List of Countries and this has been brought about by the fact that there has been a misunderstanding of the actual conditions which exist there. The position is that Canton Island, the principal island in the Group, and the one that has caused the difficulty, is under the joint

jurisdiction of Great Britain and the U.S.A. It is an international airport and personnel on this island are permitted to use the prefixes VR and KB6, depending upon their individual nationality.

Effective 1st November, 1966, therefore, the position is:

1. All credits already established for VHL Prefix stations located on Canton Island will be credited to British Phoenix Group.
2. Credits already established for KB6 stations operating on the American Phoenix Group will be credited to that group.
3. All future credits for British Phoenix Is. and American Phoenix Is. will be treated as two distinct countries.

It should be noted that all claims for American Phoenix Is. cannot be based on contacts with stations operating on Canton Is. This is primarily in British Phoenix and will be thus credited.

Records will be amended to give credit to British Phoenix Is. where DXCC members have already submitted QSLs for contacts on Canton Island. Anyone not having credit for American Phoenix may now proceed to secure the credit.

DXCC COUNTRIES LIST FOR I.A.E.U. USE

As already indicated, a list of countries for DXCC use on I.A.R.U. members is being prepared for submission to the Executive Committee of the committee, viz. the R.S.G.B. and the A.R.R.L. Pending the completion of this list and its ultimate acceptance by the committee, there will be no further changes in the W.I.A. List of Countries.

APPLICATIONS FOR W.B.E. AWARD

Intending applicants are again reminded that all applications must be accompanied by a money order made out in favour of the R.S.G.B., payable in London, for the sum of seven shillings sterling currency.

—G. Weynton, VK3XU, Manager.

SILENT KEY

It is with deep regret that we record the passing of—

VK3DP—Jim Farrer, Oct. 25.

VK4HM—Harold J. Murphy.

On his way to the conference, Doug called on quite a number of Wireless Societies throughout the world in places like Ireland, England, France, Germany, Russia, India, Malaya and America. These visits were to exchange greetings and ideas. As a result of these efforts on Doug's part, Region 3, and particularly VK, should now be well on the map.

It may not be generally known that the W.I.A. was not in favour of sending a representative to the next I.F.U. conference originally owing to the cost. However, as all other zones favoured the move, the W.I.A. fell into line in true democratic fashion. Doug found that this move on our part was very much appreciated wherever he went.

Our Fed. Sec. certainly must have left his mark as he came home positively loaded with souvenirs and such like of the Societies he visited and each was produced for our inspection at the appropriate stage of the lecture. There were badges and cards, awards and equipment and a pair of penants for our President, to mention just a few. We even heard a message from Perry Williams, of the A.R.L., on tape.

In support of his remarks, Doug also showed us some superb slides of the places he visited in his very extensive travels. Quite a number of these places were well off the beaten track and were something very new to most of us arm-chair travellers. We travelled from Singapore to India, to Germany and then Russia, and with Doug's breezy commentary to guide us along the trip was really most enjoyable. It would be difficult to choose the most interesting place of them all, but to quite a few I feel the Russian scenes held a

keen appeal. I, for one, felt extreme surprise at the architectural beauty of the place. Most of our impressions of overseas countries and their people seem to be drawn from newspapers. I am afraid it is surprising how far off the beam we can get from these sources. That was the impression I gained from quite a number of the places seen and described.

Good old English still seems to be one of the principal means of communication wherever one goes. At the conference which Doug attended, the proceedings were translated into English, French and German, and most of the delegates were able to get by on these. I find it hard enough to struggle with one.

The places covered in the talk were as many and so varied and the time so short to absorb it all, that I feel a bit in a whirl.

Many thanks Doug for a very instructive and informative talk. The job you have done for us on this trip has laid solid foundations for the things to come next year and we are extremely grateful. Our thanks also to Mrs. Bowie for donating so much of her husband's time to the cause. Your reward will probably come in heaven, Mrs. Bowie.

There were four visitors to the meeting, but missed their names in the rush. Sorry blokes. New members admitted were: Full Members—J. M. Howden (SZCH); Associates—T. W. Mitchell, I. L. Gorauch, J. P. Kell and A. K. Sanders.

Among the new members mentioned last month was Russell Rola, whose call sign appeared incorrectly; his correct call is ZGGR.

The December meeting will no doubt take the usual form of the Christmas meeting, so keep the night free.

WESTERN ZONE

Members of the Zone were all very sorry to hear that Jim Farrer, 3DF, of Deep Lead (via Stawell) had passed away on October 25. George and I attended the funeral to be held in Horsham on December 14. It will be a one-day affair and final arrangements will be made over the hook-ups held on Wednesday nights in the 40 metre band. We will be pleased to welcome all visitors.

NORTH EASTERN ZONE

The Annual Convention of the Zone was held on Sunday, Nov 3, in the auditorium of radio station 35R, Shepparton. The meeting was presided over by Bruce 3AGG who had been elected to only a fortnight ago to the position of Vice-President. Secretary for the day was Les 3ALF who did a good job; pity he wasn't elected personally. I may add that the evening was very lively, "just like a meeting of the magazine committee," was one comment heard.

Various subjects were brought before the meeting and were debated at length, so much so that the chairman had to apply the gag to keep the meeting moving in the proper direction.

At the conclusion of the general business, the chairman called for a minute's silence in memory of Alan Rodger, VK3UL, who recently joined the ranks of "Silent Kev".

The meeting was adjourned to the foyer of 3SR where a swap-disposal session took place. It was a most interesting and profitable place to get on the air without all the junk he had brought along. OK Les, I'll take it up some time with you if you can catch me.

Lunch time adjournment was to the local reserve, just down the road a little. Quite a few people with harmonics and XYLs to swell the number, enjoyed a picnic lunch. Others went home and were not seen again for the rest of the year.

A visit to the transmitting station of Radio Australia took up most of the afternoon and the day closed with the Melbourne district meeting "Au Revours!" and the members wended their weary ways homeward.

Among the missing was Alec 3AT who has been bitten by the photographic bug and is rarely heard on the air these days. Syd 3CI must have forgotten the date; I think should have reminded you when I was in last week. Syd, for those interested, Syd works the JA's consistently on six metres, but always has the time for local contacts on this band.

Andy 3TD must have thought he would be made some correspondent because he had a beaut excuse! Tom 3TS and George 3OD were absent. I can't think up a good excuse for you two fellows, but please remember you were missed. To the rest I don't know or have failed to mention, you were all missed by your friends. Remember a strong Convention is a strong Zone. This Zone won a trophy for being the most progressive Zone in the world, as well as the Zone hook-up, Monday nights at 8 on 80 metres. All shift workers excused.

EASTERN ZONE

We regret to learn that George 3ZCG cannot carry on as notes correspondent due to pressure of work and being absent from the zone for periods. We welcome back to the zone hook-up Graham 3OD. David 3DV was on the zone mobile during October, however now inactive while building power supply for 813. Ray 3ZCG, Stuart 3ZAB, and Peter 3ZCG still active on 2 and 8 mcs, while Peter 3ZDF, George 3ZCG working KV4, and Jas on 8. Hear Ron 3PR working 40 mcs lately. S.W.V. All McKrell and Ken Robertson are busy modifying recently-acquired Command receivers.

GEELONG AMATEUR RADIO CLUB

Activities in the club still continue at an all-time high. Membership is increasing steadily and to cope with this increase, a well arranged cybium, more classes and tutorial evenings cater for all enthusiasts.

Al 3AJT gave an enlightening lecture on the subject of radio fault finding, stressing the need for simple/last equipment, a thorough knowledge of circuitry and what to expect from various components which could be at fault. We always welcome a visitor and a newcomer. Melbourne and George 3WJ lectured to us on the nationally important topic of civil defence. Many facts of this important subject were covered and members here are more enthusiastic than before on maintenance of equipment and its constant use.

A tea hunt was held on 80 mcs in the Geelong area one evening recently. Bob NIC and K. Vriens took out the equipment. There were six cars taking part.

We were indeed honoured when the Federal President (Max Mull), George Glover and Reg

Greetings

TO WISH ALL FELLOW SCRIBES

the following: —

- (a) Good Health to You and Yours,
- (b) Happiness for ditto.
- (c) Good Fortune ditto ditto.

If you have (a) and (b), (c) is a pushover

★
FOR 1959 — — A TOAST!

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Sub-Editors Mk. I, II, III, and IV.

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a Prosperous New Year

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| ★ WIRELESS FOR BEGINNERS, Bolts | 15/9 + 1/- " |
| ★ QUALITY AMPLIFIERS FOR A.C. MAINS, Data Publications | 6/9 + 7d. " |
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Haz SDO was well received and indicated by its warrants that the programme which had been deferred for some time was worth waiting for.

The A.O.C.P. class is still in process of forming, so any of you who have not lined up, or given your intentions to Norm, should do so now to get into the class and not miss any lectures.

Joe SFO is still causing his friends and relatives some concern, and he appears a long way from being well. We are all hoping and hope the various medicine men can continue to help you.

During the month your scribe also went walkabout and visited some of the North and Western areas, so naturally a few shacks were turned. The first was at Laura where we were looked after by a very friendly and very charming family acquainted to our comfort.

Austin has quite a set-up there, and an ideal QSL layout, the efficiency of which he can demonstrate with either QSL cards or go on the air and prove it. He did both, and during the evening kept a stand on 50 with his W friend Floyd, then on 10 to GYLX (yes, a lady too) and then to wind up got into a net on 80 mx with Doc SMD and Brain SAK. It would take too long to describe the gear, but I have a photo for publication some day, but it is well set up, 10 watts on 80, through to 10, a 3 el wide-spaced antenna, and a 3 el dipole on top for the rest. The v.f.o. is placed alongside the rx (an SX190) and the switching and netting controls placed in the right spot for quick action.

A nice set-up and he is to be congratulated on it all. Since our visit it has been learned that a severe storm caused a lot of damage to the tower and a lot of damage to the beam. Hope by now it is all restored to normal.

The next seen was Wal SDF, who first of all told me of a local station, a very interesting plant, where a very interesting "look see" was done. Wal's has his gear set up "table top" style and he is looking for a home-made antenna and puts a lot of us to shame by having, and using, a home-brew rx! A nice place of gear it is too and has all the gadgets for doing, in fact, anything you like to do. So far efforts in that direction not successful.

Pat SLT of course could not be overlooked, although we did not get around to his home QTH to see the new cultural quad in embryo. A 3 el. is doing the job now and keeping him happy on 20.

I nearly forgot, remember the bowls trophies Wal SDF mentioned once? Right, I saw them, touched them, and after an examination of a profile of the operator consider he is eligible and can enjoy them as a trophy.

On the return, Ern SEN came under the microscope, when he left Jan in charge and we went down to see the new QTH he has there, too, the antenna farm is dominated by a tower topped at 80 ft. with a long vagi on a 30 ft pole, a 3 el. on 10, then 15 ft down a 3 el. on 20, and a 3 el. on 40. As a point of interest, all these sky squirts as well as an end fed flat top for 40 and 80 ft. are on one common line. Try to get him in to co-operate, we won't have a bar of it, wanting to nurse all those precious dB's, and not lose a fraction of them.

On the 20th, 8075 and 8080, and 8090, bands 8075 on 6, and 8250 on 2, with rx's an AR7 and 14-tube home-brew double conversion job taking pride of place. Once again a keen type who has done very well in the open where QRH is at a low level.

Thanks to you boys generally for courtesies and interest.

News from Burnie SFC indicates the Club not in your new quarters yet, and for the present operating from Burnie's QTH.

OSM and GYLX, who are both still recall spent some time with us last year and got his VKS call the day before departure for U.K. on 15. GYLX is looking for VKS contacts on 15. What about you GYLX?

Tom STL now at Renmark and not at Alice Springs chaps, he is still getting calls from DX operators looking for that Northern Territory call. VKX would be good Tom and clear that problem.

When in QSO from Wal SDF with SAE and Doc SMD, got mixed up and switched Bram to VKA, and changed that; Haz SAG, who was also on the hook, reckons I would make a good Ham. Steady on, Ray, might catch up with you some day, anyway will check with Doc that that's what he wants.

George SGB heard recently checking a new small mobile rig with Les SAK, and during the testing Jack SLJ joined in to thus link up with Les after a 15-year gap! Were they excited, don't know if this displays some grey-headed tendencies or just what, but speaks well for continuity of interest in the hobby. As an illustration perhaps of "grey bearding" Les recently heard a 3 el signal on 10 so he netted carefully, turned his beam on the appropriate spot and then when clear, called, and called, and called, but no reply. Reason? Found his tx wasn't on 10 anyway. Bad luck Les, that line noise must be a real worry.

Geoff SRH has started up his series gated amplifier, sounds OK too, carrier control not bad. He had a 3 el. on 5, met me some time ago. Rob SRG has taken a new 500 watt rig in N.G. so look out for a new VKS some day. Tiger for punishment Rob, last time it was ice in his pants.

Des SDK, now DXK, has settled in to his new location and likes it. He is looking for VKS contacts on c.w.-Gordon will be busy.

Keith SKH and Ken SKS, who operating from Norton Summit and Black Springs respectively, put in fine signals at the time.

Len SOC was recently done over by Gordon SXU who found Len putting more stones in still more places, but reckons he has about the best DX of Len in the hobby. As an aside, but Len built it there with that idea in mind, so he was not surprised to hear someone say it was ideal.

TASMANIA

NORTH-WESTERN ZONE

Christmas is fast approaching and yet another year will soon be behind us with its achievements or otherwise to look back on. Naturally we will look forward to better and brighter things than the year just past, bigger and better DX, and all the rest, particularly interesting to "died in the wool" Hams.

Last month the first of our instructional nights was held in our usual meeting place and for a "first night" it was a huge success and a real credit to the organizers. A score of more chaps rolled up and were turned firstly to a good lecture on the many and varied uses of the trusty g.d.o., by George TXL, who also gave practical demonstrations where possible. Truly a versatile instrument the same g.d.o.

Peter TFF gave a very vivid demonstration with an ingenious piece of test equipment from which you could hear the electrons and sometimes hear the sound of the electrons. He produced quite healthy sparks between leads and demonstrated magnetic attraction by inducing a place of wire circuit.

Les TKC portable worked Harold TME on 200 Mc. and both interestingly explained their transceivers. Only 2 watts input and they have worked around the world. One of the members of the boys are contemplating similar rigs; even Athol TLR stated that he would like to do it. And he has a most nice v.h.f. tx hunt in the not too distant future.

Roy TRN brought along a block of h.f. converters and Max Lves said a few words about an indicating wave meter which covers from 10 to 30 megs. with the one tapped coil. Harold looks like becoming our new auctioneer as he did a good job of disposing of the few articles which were produced for sale. Once again a goodly supper was enjoyed by all present. Our President moved a vote of thanks for our Secretary's TXL who did a lone job in preparing the program.

Chassis for the mobile rigs for the Burnie Fire Brigade were on display, finished in nice grey hammerhead, some of the new circuit boards and working and produced some interest. Shouldn't be long now before the Burnie Fire Brigade are working "mobile".

Another 40 or more members were present in December, details will be discussed at the next meeting, so best the d.f. gear is given a run, chaps, with perhaps a few improved innovations which will make the time for finding can be reduced don't you?

The best bit of news for this month is that our worthy and "young" group, are successful in obtaining our A.O.C.P., we

are both filling in the necessary forms as fast as possible. It is to be hoped that we can find a photographer game enough to take our picture.

Trust some of you will answer our pleading calls of CQ some time in the near future.

NORTHERN ZONE

Well chaps, here we are again, all reorganised with our new President Geoff (Associate) and Treasurer cum Secretary, Max TCA. After commencing rather a quiet month, a week of notes from the North, I now find myself (Associate Ray) with the job of writing them—so here goes with my first effort.

Our first meeting was held at each member's home, taken in turn, on the second Friday of every month at 8 o'clock or thereabouts. I am sure that it is a credit to a busy life to place to a hall in the city. Everyone gets a turn as host and as mentioned by a voice from the back row, we all get a chance to spy on his secret projects.

At the October meeting, which was held at the home of Max TCA, there was a good muster of members, also a very welcome visitor in the person of George TGC, who made about a 60-mile round trip to be present.

Max's very neat station and l.v. set were the centre of attraction, and a most interesting Gues we will have to press on with the studies and get that A.O.C.P. fellows!

The weather was unkind—no temperature in versions, etc., and probably just as well as I reckon it may have held up the meeting quite a lot. At the close of the meeting a very nice supper was provided by Max's TXL.

Incidentally, I believe that the higher frequencies are to receive a bit of a bashing shortly. The 30, 40, and 144 mhz bands will commence again in the north, so get all those beams and super regens. out of mothballs for a while.

Len TBA and Col TLE are burning the midnight oil working on 228 meg. rigs in preparation for a first contact with VK3 land. How about a few more of you?

The next meeting will be held at my place at 11 Mayne Street, Invermay on Nov. 14, so take up in the three fellows, everyone welcome—Ray, Walcott.

PAPUA-NEW GUINEA

There has been more activity on the bands here this month as conditions have greatly improved in this region. Bill SBW has been chasing a signal on 10, and a few others have got a nice signal, too. Nice work, Bill! Bill works 14 and 21 Mc. Doug SGB has been up on 10, and lately has been very pleased with the results. This band really opened up early in the week. Doug has only been a short time, and he only has twelve contacts confirmed, but he has made some difference and has now settled in to the new QTH he will put up a beam. I believe it'll be to another quad.

These are beginning to be popular up here. Peter STN has been on the bands and working DX quite recently. How's the new ARMS performing Frank? Bob S Roger (ah choo) Roger, is very active on 21 meg., hope you will be able to hear him. I am sure that you are putting a much better signal into Boroکو with the ground plane; we can read morning glories now. It's a must copy. Bill SFW is back from leave and has been on the air and putting a good signal into Moresby. Welcome home, Bill.

Our member in the name of Pat BCP, who is living in Kavieng, a hearty welcome to the Division, Pat, and hope your stay with us will be a pleasant one. We hope you will be able to give us a jolly morning hook-up. Bob SGB did not get to Rabaul as was anticipated, he was recalled by his employer, but he is planning to return to us a long spell and has been heard working a little DX. How about calling in on Sunday morning and having a little chat with me. I am bush as I haven't heard him for some time. Maybe you have shifted to the new QTH Norm and haven't got that beam up yet.

Our member, who has been heard working out of the jungle, it's time we heard a visit from you Ray and bring a few 8075 and 8080 notes. The QSL has been very quiet this month with no outgoing, and all very few incoming. Everybody must have writer's cramp. The QSL Manager will be able to furnish you with a list of names looking for tit-bits for the column. Don't forget the monthly meeting is the last Wednesday of the month at the R.S.L. Rooms, so until then, we are happy listening.

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Advertisements under this heading will only be accepted from Institute Members who desire to dispose of equipment which is their own personal property. Copy must be received by 6th of the month, and remittance must accompany advertisement. Calculation of cost is based on an average of six words a line. Dealers' advertisements not accepted in this column.

FOR SALE: AMR101 Receiver in excellent condition. G. V. Randall, 45 Bellevue St., Chatswood, N.S.W.

FOR SALE: A & R 75w. Mod. Transf. and A & R Type IT588 driver trans. Both brand new, never used. One American ATR inverter, 32v. d.c. to 230v. a.c. 100-150w. output. J. F. Anderson, Nullawarre, Vic.

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